



**CORE CUT
OPERATOR'S MANUAL**

**CC8574DD
RIDER SAW**

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Part #: 1808501-03

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Introduction

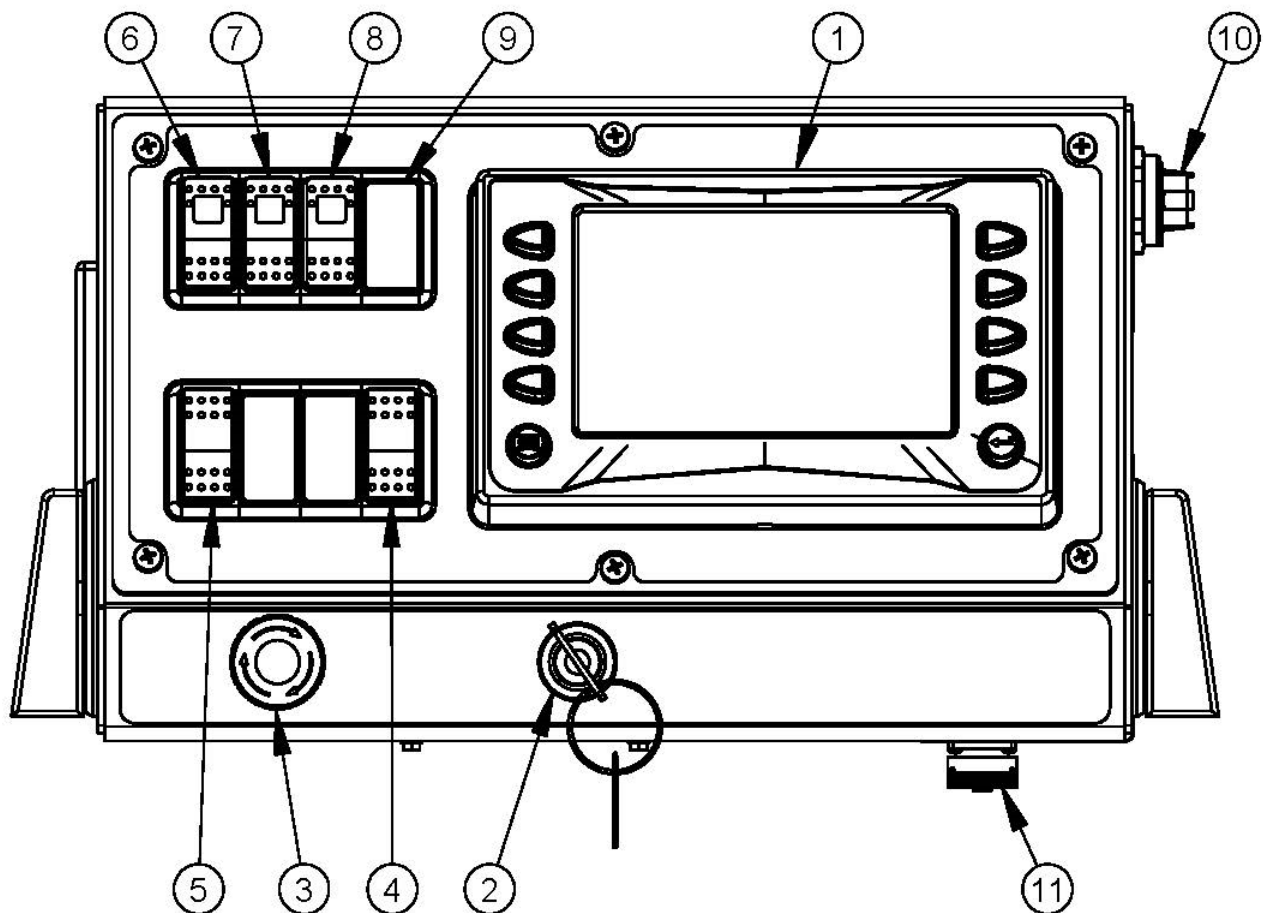
Welcome to the Diamond Products family and thank you for choosing Diamond Products equipment. At Diamond Products we are driven to ensure you are completely satisfied with your product and continually strive to improve our product line so that we can offer you the best possible equipment in the industry.

This operator's manual is a critical document that provides pertinent information regarding the safety, operation, maintenance, and care of your new equipment. Keep this manual available at all times. Operate the equipment and all of its components according to this manual. Failure to comply with and understand the following safety, operation and maintenance instructions can result in serious injuries and/or death. All operators must be properly trained or supervised by experienced personnel prior to using this equipment and should understand the risks and hazards involved. Diamond Products discourages improper or unintended equipment usage and cannot be held liable for any resulting damages.

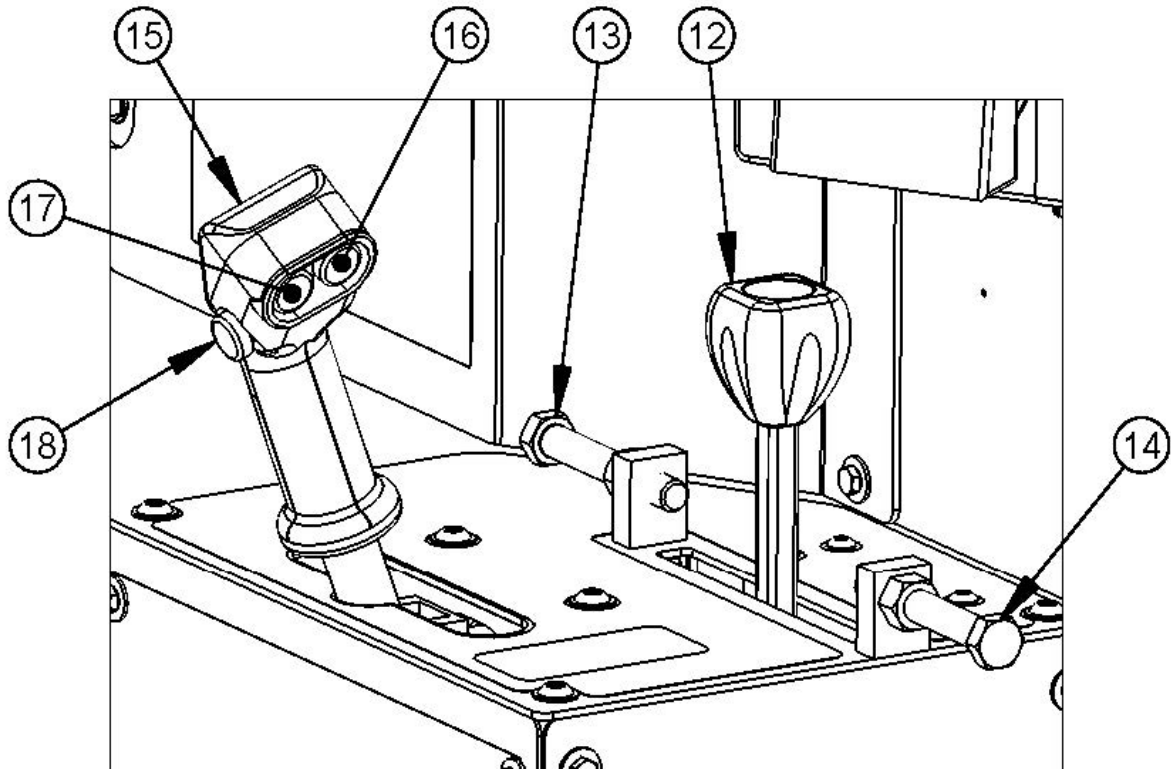
Equipment modifications should be made by Diamond Products to ensure safety and design. Any modifications made by the owner(s) are not the responsibility of Diamond Products and void all equipment warranties if a problem arises as a result of the modification.

Refer to the Diamond Products Parts List for additional information and part diagrams. Refer to the engine/motor manual and manufacturer as the primary source for all safety, operations, and maintenance instructions regarding the engine/motor. Prior to operating, record the equipment's serial number, and the engine's/motor's model and serial numbers in Appendix D.

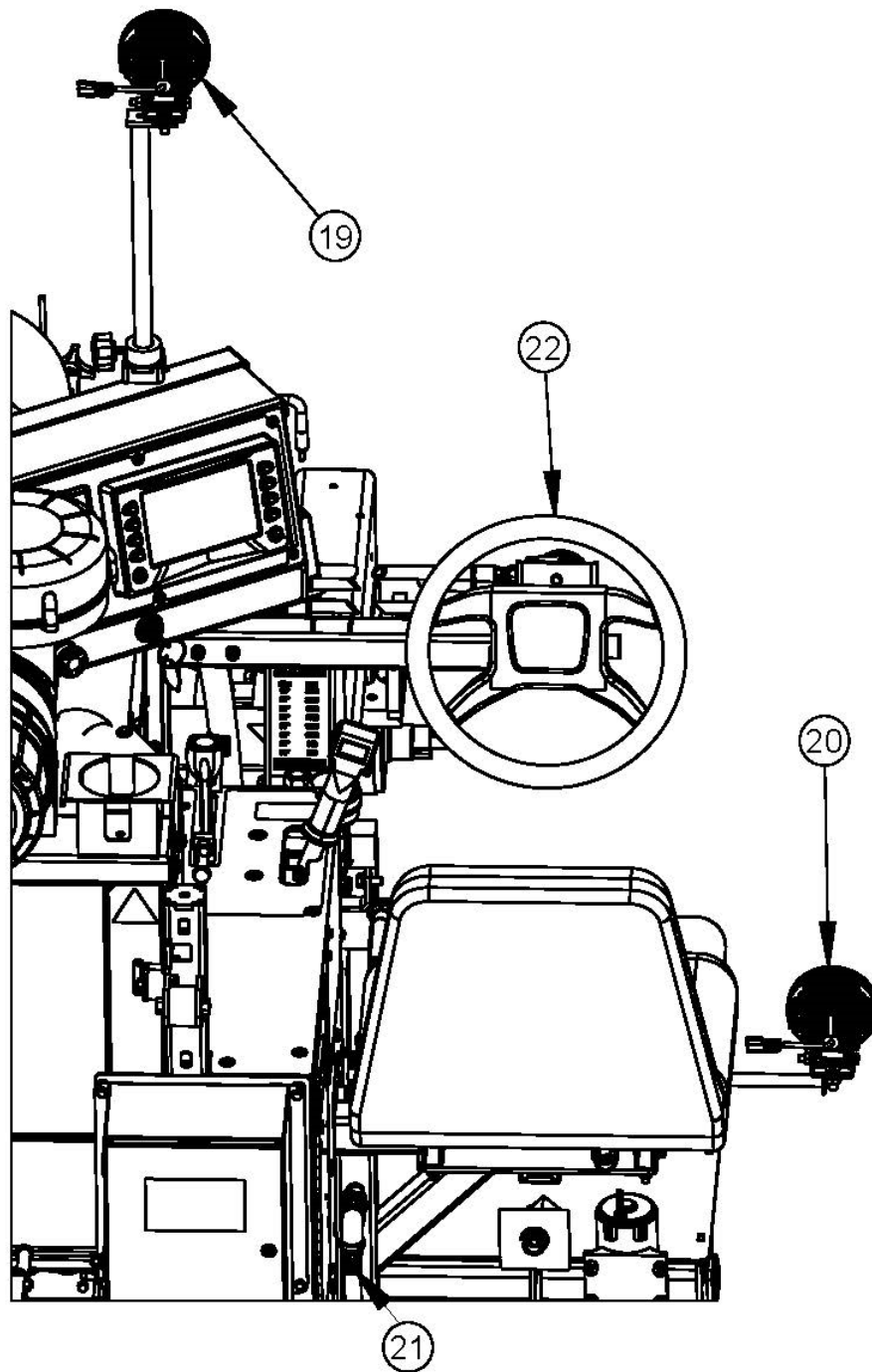
CC8574DD Controls



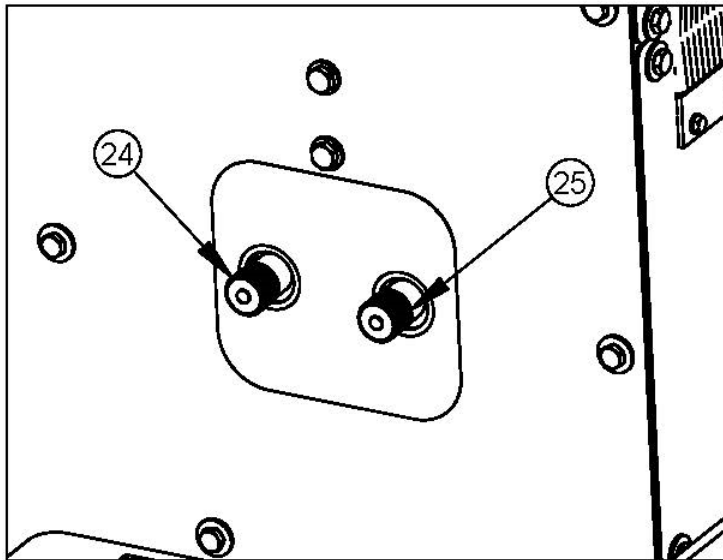
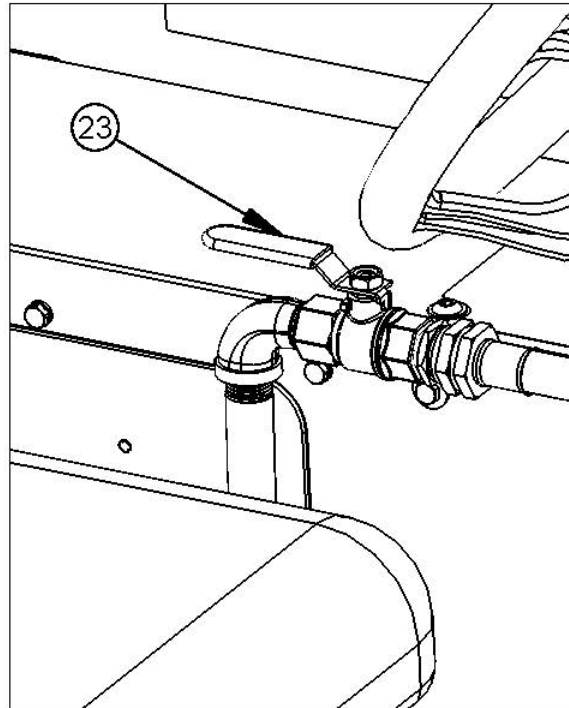
1. Display Panel – Monitors and displays various engine and machine parameters.
2. Ignition Switch – Starts the engine and provides power to certain components.
3. Emergency Stop Button – Stops the engine.
4. Engine Throttle Switch – Increases and decreases engine/blade speed (RPM).
5. Horn (Panel Location) – Activates the horn.
6. Top Light Switch – Activates the top spotlight.
7. Bottom Light Switch – Activates the bottom spotlight.
8. Strobe Light Switch – Activates the strobe light.
9. Water Pump Switch (Optional) – Activates water pump.
10. USB Port Connection – Allows for program updates.
11. Deutz Data Port – Connection point for Deutz engine diagnostic tool.



- 12. **Blade Speed Control Lever** – Adjusts blade pump outlet flow to operate the blade in a down cut or up cut direction.
- 13. **Down Cut Stop Bolt** – Set for a given blade size to quickly return to a desired speed.
- 14. **Up Cut Stop Bolt** – Set for a given blade size to quickly return to a desired speed.
- 15. **Wheel Drive Control Lever** – Forward, reverse, neutral, and parked/stop control.
- 16. **Blade Arm Raise Pushbutton** – Applies hydraulic pressure to raise the cutting blade arm.
- 17. **Blade Arm Lower Pushbutton** – Applies hydraulic pressure to lower the cutting blade arm.
- 18. **Horn (Control Grip Location)** – Activates the horn.

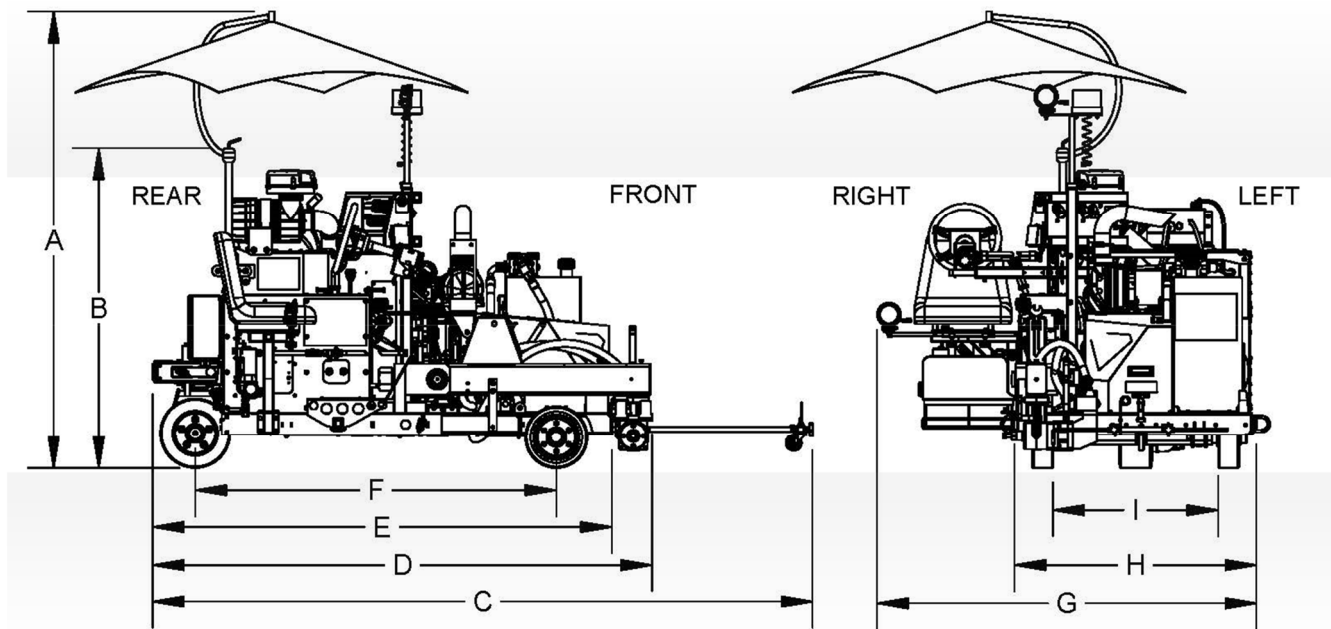


- 19. Top Light – Provides area lighting.
- 20. Bottom Light – Provides area lighting.
- 21. Water Inlet Hose Connection – Attachment point for water supply
- 22. Steering Wheel – Provides directional control for vehicle movement.



- 23. **Water Control On/Off Control Valve** – Turns water flow to the saw blade on and off and controls water flow rate.
- 24. **Blade Raising Speed Valve** – Controls the raising speed of the cutting arm assembly.
- 25. **Blade Lowering Speed Valve** – Controls the lowering speed of the cutting arm assembly.

CC7574DD Dimensions & Orientation Definition



CC8745 Rider Saw Dimensions		Inches	Millimeters
A	Saw Height - Max.	90	2286
B	Saw Height - Min.	64	1626
C	Saw Length - Max.	127	3226
D	Saw Length - Min.	96	2438
E	Frame Length	89	2261
F	Wheel Base Length	70	1778
G	Saw Width	66	1676
H	Frame Width	47	1194
I	Front Wheel Inside Width	32	813
-	Blade Raise Height - Max.	32	813

CC8574DD Specifications

Saw Model	Blade Guard Capacity	Blade Cutting Depth Max	Blade Shaft Speed	Blade Flange Size	Operating Weight	Crated Weight
CC8574DD-14	14" (350mm)	4"	2900 rpm	6" OD	3,715 lbs.	4,065 lbs.
CC8574DD-20	20" (500mm)	7"	2450 rpm	6" OD	3,725 lbs.	4,075 lbs.
CC8574DD-26	26" (700mm)	10"	1950 rpm	6" OD	3,741 lbs.	4,091 lbs.
CC8574DD-30	30" (800mm)	12"	1650 rpm	6" OD	3,749 lbs.	4,099 lbs.
CC8574DD-36	36" (900mm)	15"	1300 rpm	6" OD	3,763 lbs.	4,113 lbs.
CC8574DD-42	42" (1100mm)	17.5"	1050 rpm	7" OD	3,772 lbs.	4,122 lbs.
CC8574DD-48	48" (1200mm)	20"	900 rpm	8" OD	3,794 lbs.	4,144 lbs.
CC8574DD-54	54" (1400mm)	22.5"	850 rpm	9" OD	3,870 lbs.	4,220 lbs.
CC8574DD-60	60" (1500mm)	25"	750 rpm	10" OD	3,900 lbs.	4,250 lbs.
Engine Model	Deutz TD 2.9 L4					
Emission Regulation	EPA-CARB Tier 4 Final / EU Stage III B					
Engine Type	4 Cylinder, liquid cooled, common rail high pressure fuel injected, turbo diesel					
Engine Max Power	74.3 hp @2600 rpm (Deutz rating)					
Peak Torque	192 Ft-Lbs (260 Nm) @1800 rpm					
Engine Air Filtration	Dry dual element with spinner pre-cleaner and restriction indicator					
Battery	12 Volt (600 CCA) group size 24					
Starter / Alternator	12 Volt, 2.6 kW dust proof starter / 95 Amp, 14 Volt Alternator					
Ambient Operating Temperature Range	32°F - 120°F (0°C - 49°C)					
Maximum Operating Elevation	6,800 Ft. (2,070 M)					
Fuel Type	Ultra low sulfur diesel (Cetane 45 min.)					
Fuel Tank	9.5 Gallon (36 Liter) with electronic fuel level indication					
Engine Oil	SAE 15W-40 API class CJ-4 (10 Qts./9.5 Liter)					
Radiator Coolant	Deutz Extended Life 50/50 Pre-mixed (3 Gallons/11.3 Liter)					
Hydraulic Fluid	Mobile DTE 10 Excel 46 (25 Gallons/95 Liter)					
Planetary Speed Reducing Gearbox Fluid	Synthetic ATF, 0W-20 (1 Qt.)					
Front Wheel Lubrication	Mobile HTS, Black Lithium Grease					

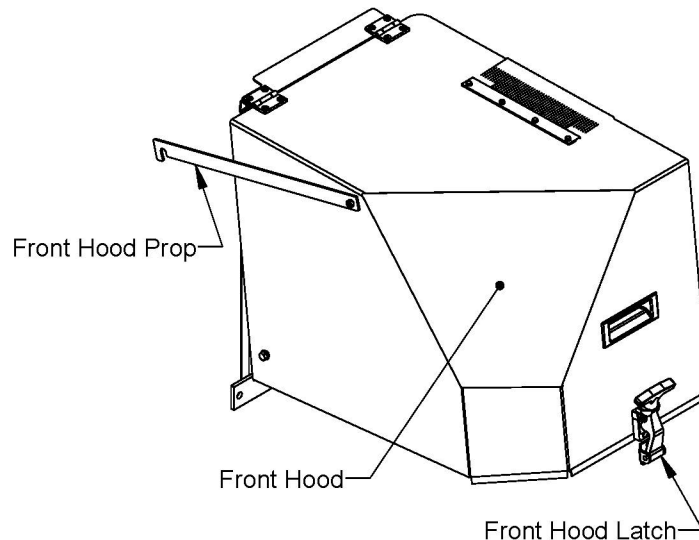
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Blade Arbor Size	1" Diameter with drive pin
Blade Flange Style	Quick disconnect
Blade Shaft Size	2-1/4" OD with right side blade mounting
Blade Shaft Bearings	Pillow block with two single seal ball bearings
Blade Shaft Drive	Parker 3.65 CI hydraulic motor with 14 tooth splined drive shaft
Blade Coolant	Dual stainless steel multi-jet spray tubes
Blade Guard Attachment	Slip-on tapered spade with rear bolt connection
Cutting Arm Raise and Lower	Hydraulic 4-way solenoid valve
Blade Raising & Lowering Speed	Two adjustable panel mounted flow control valves
Blade Depth Control	Electronic depth indicator and programmable depth stop
Blade Alignment	Telescoping front pointer with tracking adjustment
Front Wheels	Hub mounted, 12" OD polyurethane (Tapered bearings)
Rear Wheel	Hub mounted, 13-1/2" x 6-1/2" x 8" Rubber
Rear Wheel Drive	Hydraulic motor with integral brake
Parking Brake	Hydraulic pressure to release

Service Access Points

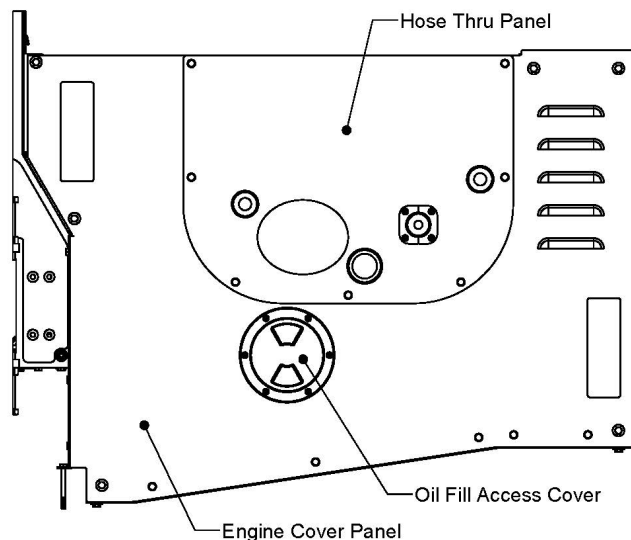
Doors and panels are designed to provide easy access to internal parts and systems for maintenance purposes. These access points are located in the front, on the top, and on either side of the machine.

Front Hood



The front hood is located at the front of the saw and provides access to the hydraulic pump assembly. It can be opened and held in place using the front hood prop. It is important to note that in order to raise the front hood, the cutting arm assembly must be lowered to the full down position.

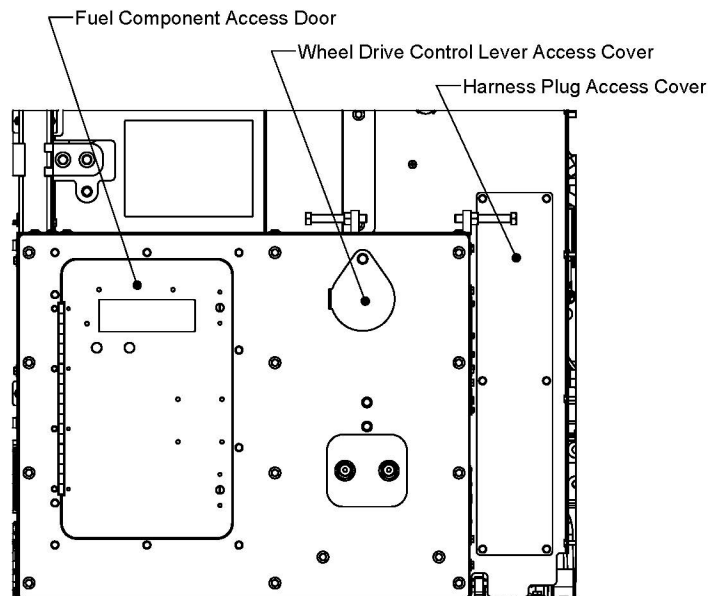
Top Access Panels



The engine top cover assembly is comprised of three individual access points:

1. **Engine Cover Panel** – Allows access to the upper engine area as well as the fan shroud assembly.
2. **Hose Thru Panel** – Allows minimal access to the upper engine area.
3. **Oil Fill Access Cover** – Allows access to the engine oil fill cap.

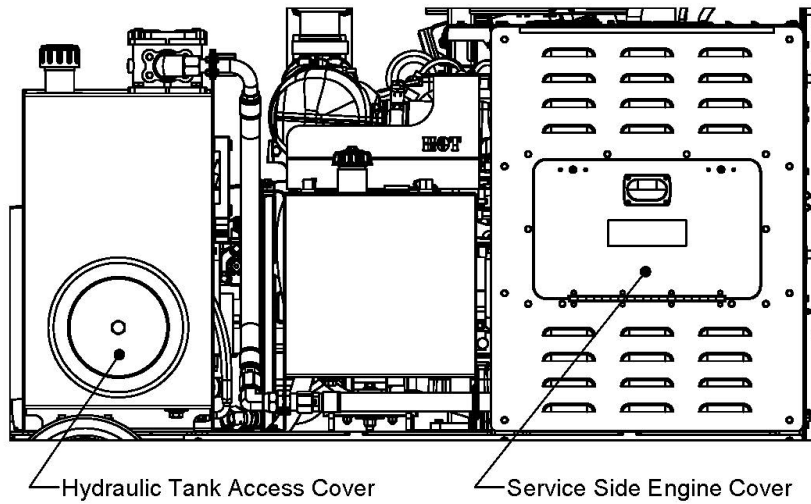
Operator Side Access Panels



On the operator's side of the machine there are two service access panel provided:

1. Fuel Component Access Door – Allows access to the following components:
 - Fuel pump
 - Fuel pre-filter
 - Cutting arm raise/lower valve assembly
2. Wheel Drive Control Lever Access Cover – Allows access to the grease cap and wheel drive control lever tensioning screw.
3. Harness Plug Access Cover – Allows access to the following components:
 - Engine Control Unit (ECU) plug connection
 - Hydraulic hose clamps
 - Access to install an auxiliary pump on the engine PTO

Service Side Panels



There are two access panel located on the service or left side of the machine:

1. Service Side Engine Cover – Allows access to the maintenance side of the engine as well as the battery and wheel drive charge filter.
2. Hydraulic Tank Access Cover – Allows access to the inside of the hydraulic tank for cleaning

Safety

Operate the equipment and all of its components according to this manual. Failure to comply with and understand the following safety, operation and maintenance instructions can result in serious injuries and/or death. All operators must be properly trained or supervised by experienced personnel prior to using this saw and should understand the risks and hazards involved. Diamond Products discourages improper or unintended equipment usage and cannot be held liable for any resulting damages.

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Refer to the Diamond Products Parts List for additional information and part diagrams. Refer to the engine manual and manufacturer as the primary source for all safety, operations, and maintenance instructions regarding the engine. Prior to operating, record the saw's serial number, and the engine's model and serial numbers in Appendix A.

Notice: *The information in this manual may be updated at any time!*

Safety Alerts



DANGER

Serious injuries and/or death will occur if these instructions are not followed.



WARNING

Serious injury and/or death could occur if these instructions are not followed.



CAUTION

Mild and/or moderate injuries could occur if these instructions are not followed.

Proposition 65

PROPOSITION 65



WARNING: This product produces gasoline or diesel engine exhaust, which is known to the state of California to cause cancer, birth defects or other reproductive harm. For more information go to:
WWW.P65WARNINGS.CA.GOV

PROPOSITION 65



WARNING: Concrete cutting produces dust that can expose you to chemicals including silica crystalline (airborne particles of respirable size), which is known in the state of California to cause cancer. For more information go to:
WWW.P65WARNINGS.CA.GOV

Spark Arrester Requirement



WARNING

In the State of California it is a violation of section 4442 or 4443 to use or operate the engine on any forest-covered, brush-covered, or grass-covered land unless the engine is equipped with a spark arrester, as defined in section 4442, maintained in effective, working order or the engine is constructed, equipped, and maintained for the prevention of fire pursuant to section 4443.

Respiratory Hazards

WARNING

Concrete cutting produces dust and fumes known to cause illness, death, cancer, respiratory disease, birth defects, and/or other reproductive harm. Safety protection techniques include, but are not limited to:

- Wearing gloves.
- Wearing safety goggles or a face shield.
- Using approved respirators.
- Washing work clothes daily.
- Using water when wet cutting to minimize dust.
- Washing the hands and face prior to eating/drinking.

For additional safety and self-protection information contact your employer, the Occupational Safety and Health Administration (OSHA), and/or The National Institute for Occupational Safety and Health (NIOSH).

General Safety

- Read and understand all safety, operations, and maintenance instructions provided in this manual prior to operating or servicing the saw.
- Keep equipment components clean and free of slurry, concrete dust, and debris.
- Inspect water hoses prior to operating the equipment. Clean, repair, or replace damaged components.
- Raise the equipment to a proper height for access when working underneath the equipment. Use chocks to block the wheels, and fit blocks or jacks under the frame edges.

WARNING

Do NOT work on equipment using the hydraulic lift system to keep the equipment in the raised position for maintenance or repair. Accidental loss of hydraulic pressure could cause the equipment to drop suddenly, resulting in serious injury or death.

- When using a jack to raise the equipment, place the jack against a solid, flat area under the frame base to properly support the equipment.
- Repair the equipment immediately when a problem arises.
- Replace equipment decals if unreadable.
- Dispose of all hazardous waste materials according to city, state, and federal regulations.
- Always have a phone nearby, and locate the nearest fire extinguisher and first aid kit prior to operating the equipment.
- Operate the equipment wearing flame resistant clothing.
- Always wear safety glasses when removing retaining rings.
- Underage or non-trained personnel should not operate the equipment.
- Keep all body parts away from rotating machinery.
- Replace all guards and access panels (unless stated otherwise) prior to operating the equipment.
- Always pivot front of blade guard fully closed to avoid serious injuries.

DO NOT:

- Assume the equipment will remain still when in neutral or when parking/stopping the equipment on a slope. Chock the wheels to help prevent unnecessary movement.
- Drop equipment, supplies, tools, etc., when handling to help prevent injuries.
- Lift and carry equipment, supplies, tools, etc., that are too heavy and/or cannot be lifted easily.
- Operate the equipment without using the appropriate safety equipment required for the work task.
- Operate or service the equipment with any clothing, hair, or accessories that can snag in the machinery, which could lead to serious injuries or death!
- Operate the equipment using attachments not associated with or recommended for the equipment.
- Operate the equipment around combustible materials.
- Operate the equipment with anyone near the work area or within the direct line of the blade.

- Operate the equipment until all unnecessary materials have been removed from the work area.
- Operate the equipment with loose nuts, screws, and bolts.
- Operate the equipment when ill or fatigued.
- Operate the equipment under the influence of drugs and/or alcohol.
- Operate the equipment on steep slopes.
- Cut concrete with guards and access panels removed.
- Grease the equipment with the engine running.
- Touch hot components when operating the equipment.
- Leave the equipment unattended until the engine is off and the blade has stopped.
- Place the equipment into storage until it has cooled down.
- Service the equipment until it has cooled down.
- Service the equipment with the engine running.

Battery and Electrical Safety

- Ignitable explosive gases are emitted from the battery. DO NOT expose the battery to sparks or open flames. Keep the area around the battery well-ventilated.
- Keep the battery level when handling it.
- Use protective eyewear or a face shield, and avoid contact with the skin when handling/servicing the battery.
- Use a proper battery tester when testing the battery strength.
- Always be sure to connect the battery cables to the proper terminal when reconnecting the cables.
- Occasionally inspect the battery, cables, clamps, and terminals for damages. Service components as necessary.
- Always keep the battery cable clamps away from the battery terminals when the battery is disconnected to avoid accidental connections while servicing.
- Immediately rinse your clothing, skin, or eyes with water if exposed to battery acid. Seek medical attention immediately!
- Disconnect the battery prior to servicing all equipment components (unless stated otherwise).
- Remove the battery when storing the equipment for longer periods.

- Always use the correct size fuses (amps) to prevent fires.

Blade Safety

- Always use reinforced abrasive blades or steel-centered diamond blades.
- Never use a wet cutting blade without an adequate water supply to properly lubricate the blade.
- Inspect all blades prior to usage and discard damaged blades.
- DO NOT install or remove a blade with the engine running.
- Keep all body parts away from rotating blades.
- Inspect the blade flanges for damages, wear, and cleanliness. Clean or replace dirty/damaged components immediately.
- DO NOT expose yourself or anyone else to the direct line of the blade when operating the equipment.
- Always use an appropriate size blade and the correct blade type based on the cutting task and the type of material being cut.
- The blade must always fit snug on the blade shaft, outer flange, and/or inner flange.
- Wear gloves and be alert to the surrounding environment when handling blades.
- When installing the blade, always point the arrow printed on the blade in the direction of the blade shaft's rotation.
- DO NOT exceed the blade's maximum recommended speed when cutting. Excessive blade speeds can cause blade breakage, resulting in serious injuries and/or death!
- DO NOT use damaged blades when cutting to avoid harming yourself, others, or the equipment.
- DO NOT use a blade for cutting that requires a lower speed than the blade shaft speed.
- Always tighten the blade shaft bolt/screw as directed to properly secure the outer flange and blade. Failure to properly secure the outer flange and blade may cause parts to loosen or fall off the equipment, resulting in serious injuries or death!
- Let the blade cool prior to removal when dry cutting (applicable models).

Blade Guard Safety

- DO NOT operate the equipment with the blade guard raised or removed.
- Blade exposure should not exceed 180° while cutting.
- When pivoting the front of the blade guard, raise/lower it cautiously and slowly to avoid serious injuries.
- DO NOT pivot the blade guard front up or down when installing/removing very large blades. Attempting to pivot the front of a heavy guard when the guard is positioned higher up for blade installation/removal makes the guard difficult to lift and/or lower. In this situation, install/remove the blade guard front instead of pivoting it.
- Always pivot the front of the blade guard 180° (fully upward) so the guard does not swing down unexpectedly, causing serious injuries.
- Always secure the pivoted section of the blade guard using the detent pin (guards 26" and up).
- Use extreme caution when installing/removing parts of a guard or the entire guard as guards can be extremely heavy and may require installation/removal at moderate heights.
- DO NOT install or remove the blade guard with the engine running.
- Always use a blade guard that corresponds with the blade size.
- Inspect the blade guard and water tubes prior to starting the equipment. Clean or replace dirty/damaged components immediately.

Fuel Safety

- Always use caution when refueling.
- Store all fuel in appropriate safety containers.
- DO NOT operate the equipment with a fuel leak.
- DO NOT fuel the equipment with the engine running.
- Let the engine cool prior to adding fuel.

- Refer to the engine manual for recommended fuels.
- Always use appropriate fuels in cold weather.
- Move the equipment away from the refueling area prior to starting the engine.
- DO NOT smoke or expose fuel to open flames when filling the fuel tank or working with fuel.
- Clean up any spilled fuel prior to starting the engine.
- Drain the fuel tank and fuel lines when storing the equipment for longer periods of time. Refer to the engine manual for additional recommendations.

Engine Safety

- Refer to the engine manual as the primary source for engine safety.
- Always know how to turn off the engine quickly for emergency purposes.
- Make sure the equipment is in neutral when starting the engine.
- Fill the fuel tank and check the oil level prior to starting the engine.
- Keep all body parts away from rotating equipment parts with the engine in operation.
- DO NOT start the engine without the air filter(s) installed.
- DO NOT allow dust to enter the air intake tube when cleaning/replacing air filter(s).
- Replace damaged components immediately that may allow dust to enter the engine.
- DO NOT leave the engine running unattended.
- Always operate the equipment in well-ventilated areas.
- Concentrated engine exhaust can cause loss of consciousness and/or death.
- DO NOT touch the engine/muffler assembly with the engine running, and always let them cool down prior to touching or servicing the equipment.
- Handle hot oil carefully when changing the oil.
- Let the engine cool prior to removing pressurized caps (applicable models).

- DO NOT use any starter substances or starter fluids (e.g., starter fluid sprayed into the air filter) when starting the engine using a glow plug (applicable models). These materials are extremely flammable and explosive, and can melt parts or possibly explode when used to help start the engine.

Cutting Safety

- The direct work area should not contain buried or embedded electrical, gas, or water lines that could be damaged and/or cause personal injury while cutting.
- Turn off all electricity, gas, and water around the direct work area prior to cutting.
- Inspect the work area to ensure nothing will impede full control of the machine at all times.
- DO NOT expose yourself or anyone else to the direct line of the blade when operating the equipment.
- DO NOT allow any person, animal, and/or objects in and around the work area while cutting.
- DO NOT install a blade on the machine until it is in the cutting area.
- Ensure the work area is adequately illuminated to ensure safe operation of the machine.

Hydraulic Safety

- Turn off the engine prior to servicing hydraulic components.
- Lower the equipment completely prior to servicing to decrease the hydraulic pressure in the lines.
- Always make sure any hydraulic components being serviced are not supporting the weight of other equipment components. If a particular component is under pressure when connection points are loosened, oil may spray out forcefully.
- Always place a piece of cardboard or paper up against hydraulic components, or use a leak detection fluid to check for hydraulic fluid leaks. Keep all body parts away from leaks and/or areas that may eject hydraulic fluid. Pressurized hydraulic fluid can penetrate the skin, causing serious injuries. Seek medical attention immediately!

Belt Safety

- Turn off the engine and let the belts cool down prior to servicing them.
- Regularly inspect the belts for fraying, stress cracks, and/or breakage and replace immediately when damaged. Always check the belt alignment prior to operating the equipment.
- Use extreme caution when working with belts and rotating machine parts to avoid entanglement.
- Over-tensioning belts may reduce the life of the gearbox bearings. Under-tensioning belts may cause slippage, shorter belt life, and/or poor equipment performance.
- Squealing belts indicate looseness.
- DO NOT use old and new belts together on the same sheave.

Transporting Safety

- Remove the blade prior to transporting the equipment.
- Make sure the truck/trailer is in good, working condition and sufficient to transport the load. DO NOT tow the equipment behind a vehicle.
- Close the fuel shutoff valve (applicable models) when transporting.
- Drain the fuel tank when transporting long distances.
- Use heavy-duty ramps that will support the weight of the equipment and yourself when loading or unloading.
- Raise the equipment to avoid damaging components while moving up and down ramps.
- Use extreme caution when guiding the equipment up and down ramps.
- Slowly drive the equipment forward down the ramp.
- Slowly back the equipment in reverse up the ramp. Avoid standing directly downhill from the equipment to prevent machine rollover.
- Place the equipment in neutral and turn off the engine once the equipment is loaded in the truck/trailer.
- Chock the wheels and secure the saw in the truck/trailer prior to transporting.
- Refer to the Department of Transportation (DOT) for additional transportation recommendations.

Lifting Safety

- Move yourself and all others away from the lifting area when hoisting the saw to prevent being crushed.
- Secure the appropriate hoisting cables, straps, and/or chains to the saw's designated lift points prior to hoisting.
- Never use the tie-down brackets (applicable models) to lift the saw.
- DO NOT attempt to lift the saw irresponsibly and/or improperly.

ISO Safety Symbols

Four ISO safety symbols are used in various locations on the machine. These symbols are:



Burn Hazard / Hot Surface



Hand Crush/Pinch Point



Electric Shock

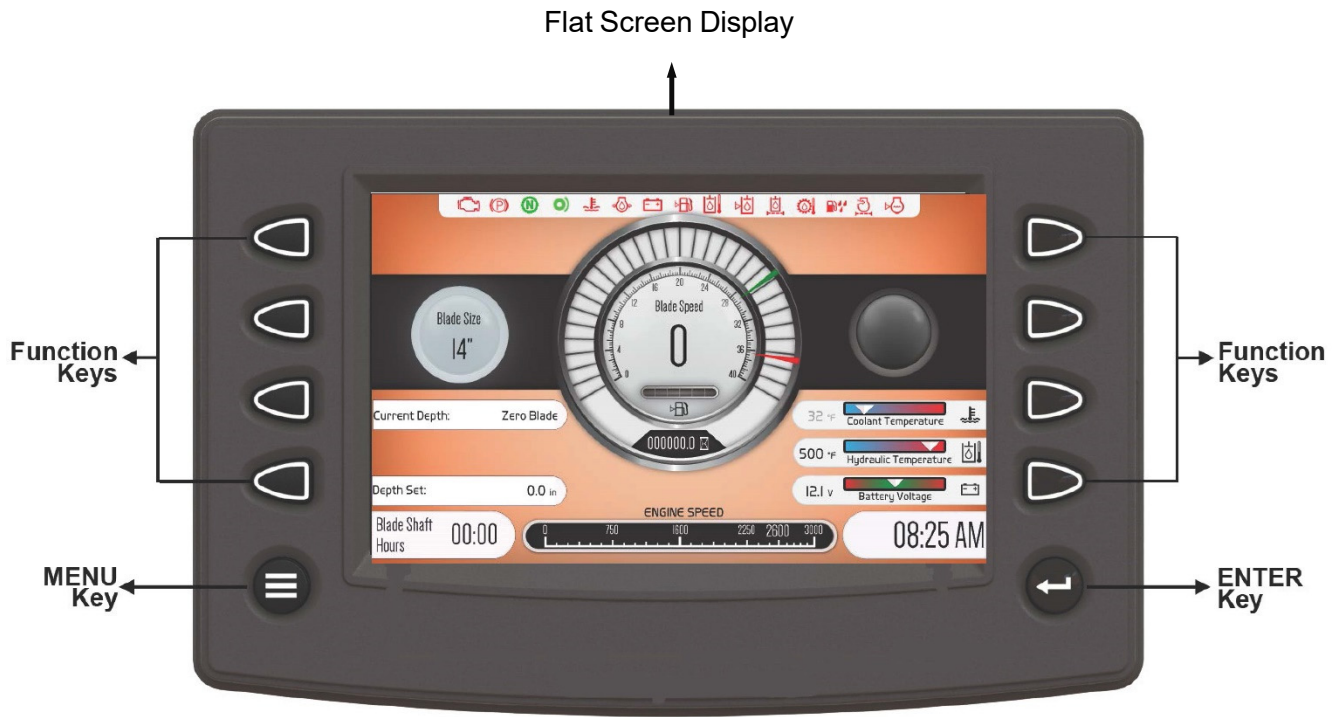


Tie Down Point

Display Panel Controller

The display panel is a rugged Controller Area Network or CAN. This is a means of linking all of the electronic systems within the saw together allowing them to communicate with each other. This section explains the functions of the unit, describes the display screens and gives details about the configuration.

Controller Features



Flat Screen Display

A color screen displays the “Home” screen, gauges, soft key commands, and fault messages, as well as menu options for setup and configuration.

Menu Key

The menu key will display a list of four available sub-menu options:

- Utilities
- Engine Diagnostics
- User Settings
- System Settings

Enter Key

This feature is used when uploading new programs to the controller.





Function Keys

The function keys correspond to the soft key commands and allow selections to be made accordingly.

Soft Key Commands

Columns of vertical commands may be located to the left and/or right of the display. They will change according to the options available for the screen being displayed.

There are four basic icons associated with the soft key commands. These icons allow for the navigation through the sub-menus, selection of commands, or deselection of commands. These icons are shown below:

ICON	Description
	Up – Navigates the cursor upward through a list
	Down – Navigates the cursor downward through a list
	Right – Navigates the cursor to the right through a list
	Left – Navigates the cursor to the left through a list



1	Blade Shaft Hour Reset	5	Clear Faults
2	Set Blade Size	6	Active Fault Display
3	Current Blade Depth / Zero Blade	7	No Function
4	Set Blade Depth Stop	8	No Function

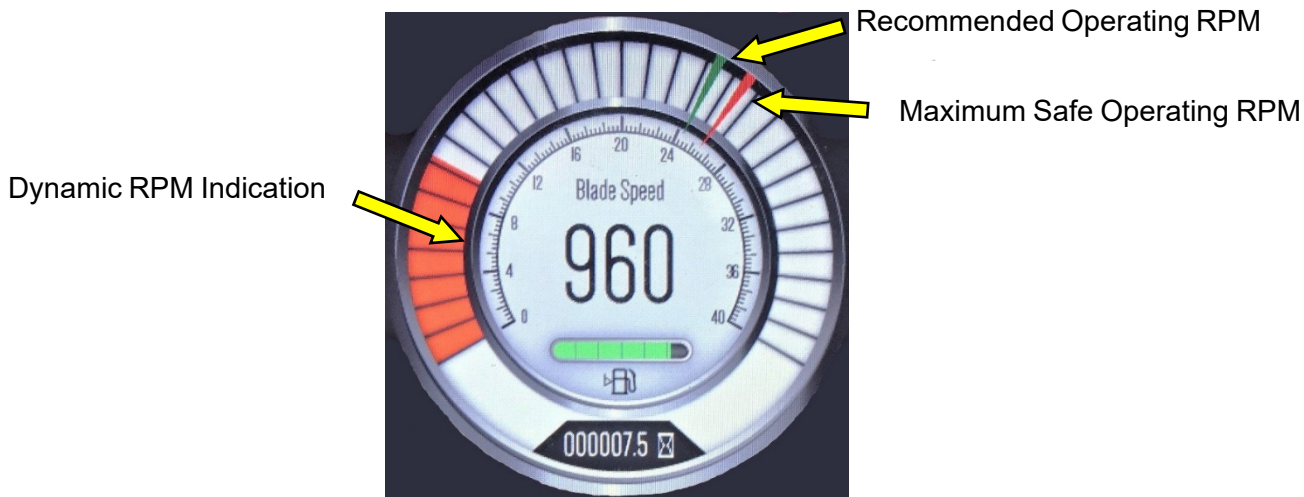
Home Screen

When the saw is operating, all essential parameters are monitored from the “Home” screen through a series of gauges and displays. At the center of the screen is a large digital gauge showing the blade speed (RPM), fuel level, and accumulated engine hours. Below that at the bottom of the screen is a digital bar gauge showing engine speed (RPM).

The right side of the display features all the status icons and gauges associated with the various operating parameters of the saw. Starting at the top, there is a display gauge showing the status of the brake, wheel drive, and blade drive. Below that is a circular display that will show any active faults associated with the saw. Three digital gauges below the active fault display show the coolant temperature (°F/°C), hydraulic fluid temperature (°F/°C), and the battery voltage (V). The last display on the right is a clock showing the time.

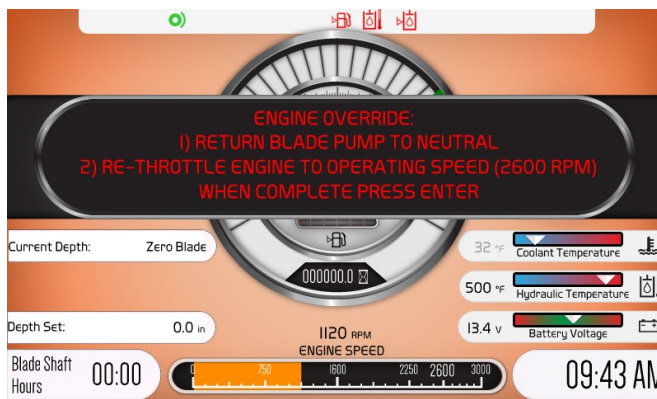
The left side of the display features all the status icons and gauges associated with all of the blade parameters. Starting at the top, there is a display gauge showing the accumulated blade shaft hours. This can be used to track blade life or record the amount of cutting performed for a given job. The counter can be reset using the soft key button located to the left of the gauge. Below that is a circular display shows the current blade size selected. This is also a soft key command that will open up the blade selection screen and allow the operator to choose the proper blade size. The last two displays are also soft key commands that allow the operator to zero out or clear the zero setting for the blade and to set or clear the blade depth stop setting.

Blade Speed RPM Gauge



The RPM gauge located in the center of the display provides the operator with several key indicators for blade speed control and operation. Two indicating arrows, one green and one red, provide static set point limits for visual reference. The green arrow indicates the recommended operating blade speed for the blade size selected. The red arrow indicates the maximum safe operating blade speed for the selected blade size. Blade speed is controlled by the operator using the blade speed lever. As the operator increases the blade speed a bar gauge will illuminate red on the outer edge of the RPM gauge providing the operator with a dynamic visual of actual blade RPM. As blade speed increases the red bars will increase and as blade speed decreases the red bars will decrease.

This saw has a designed “Blade Speed Chase Down” feature programmed into the engine control unit (ECU). When the blade speed exceeds the set limit for the displayed blade size, the ECU will de-throttle the engine to bring the blade speed back to within an appropriate range. The following message will appear on the display:



The operator must return the blade speed control lever to the NEUTRAL position and then re-throttle the engine back to normal operating speed (2600 RPM) and press the ENTER button to exit the blade speed chase down loop.

Menu Key Operations

Pressing the MENU key will result in the following four sub-menus appearing on the screen:

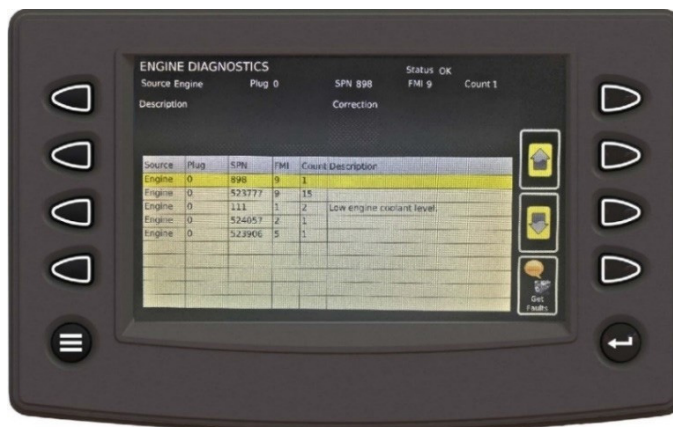
- Utilities
- Engine Diagnostics
- User Settings
- System Settings

Utilities

This menu is used for recalibration of the depth stop sensor or to calibrate a new sensor. If access to this menu is required, contact Diamond Products Technical Department at (800) 321-5336.

Engine Diagnostics

This menu will open a screen of stored historic fault codes. These codes can be toggled through using the Up and Down arrow keys to the right of the screen. To retrieve the most up to date list of historical faults, press the lower right function key associated with the “Get Faults” soft key command.



User Settings

This menu will display a screen allowing the operator to change some parametric settings. The yellow Up and Down arrows on the left allow you to move the cursor through the options. When the cursor highlights an option that can be changed, gray Up and Down arrows will appear on the right side of the display. Use the gray arrows to change the option setting. Once the options are set, press the Menu key to save and close the user settings.



The following settings can be changed by the operator:

1. Brightness (%)
2. Units
 - a) USA Standard
 - b) Metric Bar
 - c) Metric KPa
 - d) British Standard
3. Language
 - a) English
 - b) Spanish
 - c) French
4. Date (M/D/YY)
5. Time

System Settings

This is strictly an informational screen providing current program data.



Enter Key Operations

This feature is used when uploading new programs to the controller.

Display Panel Operation

Turning the ignition key switch to ON will open up the “Select Blade Size” screen.



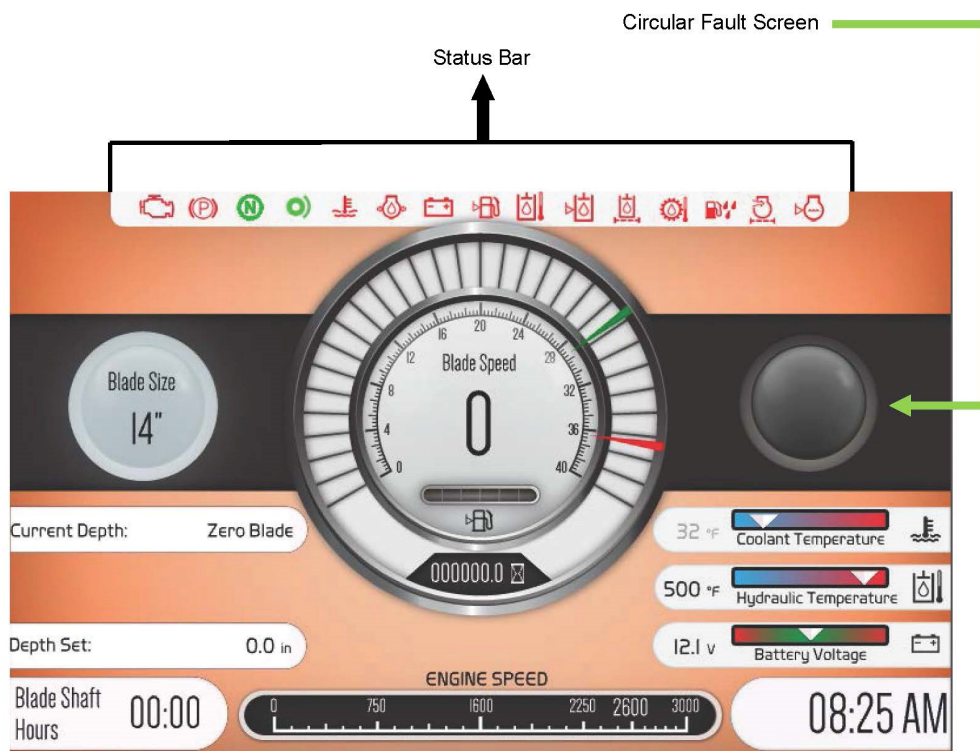
It is important to select the proper blade size to maintain blade life and cutting efficiency. To select the proper blade size, use the Up and Down arrow function keys on the right side of the controller to toggle through the available blade sizes. Once the proper size is selected, press the ENTER function key to save the setting and open the “Home” screen. Ensure to match the blade size selection with the actual blade mounted to the machine. The blade size setting determines the recommended and maximum safe operating speeds for the machine as well as the set program limits for the blade speed chase down system.

CAUTION

For blades, 42” and larger, ensure the speed reducing gearbox is installed on the cutting head. Failure to install the gearbox will result in reduced performance and loss of the blade speed chase down feature. See the “Operating” section for details pertaining to the speed reducing gearbox.

The speed reducing gearbox has a temperature switch that will display an active fault message when the gearbox temperature reaches 180°F (82°C). The message can be turned off by using the upper right hand key on the controller. The high temperature fault will remain active until the condition clears.




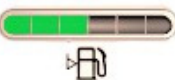

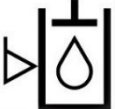




Status Displays



There are two locations that provide the operator with machine status indication. They both appear on the “Home” screen. The first is the “status bar” located at the top of the display screen. The status bar will show all icons that are currently pertinent to the machine’s status. The second location is the “circular fault screen” located on the right side of the display screen. If the machine is experiencing an active fault, it will appear in the circular fault screen and will require operation action.

The status bar located on the “Home” screen has several icons that provide the operator with additional visual indication for different parameters. These icons are always visible on the upper section of the “Home” screen.

Status Icon	Parameter	Description
	Check Engine	<ul style="list-style-type: none"> A “check engine” icon will appear anytime an engine fault arises.
	Park	<ul style="list-style-type: none"> A “park” icon will illuminate when the wheel drive control lever is in the Park/Stop position. The wheel drive control lever must be in the Park/Stop position in order to start the engine.
	Neutral (Blade Pump)	<ul style="list-style-type: none"> A “neutral” icon will illuminate when the blade speed control lever is in the Neutral position. The blade speed control lever must be in the Neutral position in order to start the engine.
	Brake Active	<ul style="list-style-type: none"> A “brake active” icon will illuminate when the rear wheel brake is engaged. The brake is actively engaged when the wheel drive control lever is in the Park/Stop position or when the engine is off.

	<p>Coolant Temperature</p>	<ul style="list-style-type: none"> • Black icon indicates coolant temperature is normal • Yellow icon indicates high coolant temperature warning (230°F / 110°C) • Red icon indicates engine shut down on high coolant temperature condition (240°F / 115°C)
	<p>Engine Oil Pressure</p>	<ul style="list-style-type: none"> • Black icon will appear when oil pressure drops below 14.5 psi (100Kpa) for 15 seconds. If oil pressure drops to 7 psi (48 Kpa) while the engine is above 500 rpm, the engine will shut down due to the low oil pressure condition.
	<p>Battery Voltage</p>	<ul style="list-style-type: none"> • Black icon indicates normal battery voltage (11V+) • Red icon indicates low battery voltage (-11V)
	<p>Fuel Level</p>	<ul style="list-style-type: none"> • Green bar gauge indicates normal fuel level (Greater than 1/8 tank) • Red bar gauge indicates low fuel level (Less than 1/8 tank) • Red icon will appear at top of display when less than 1/8 tank
	<p>Hydraulic Oil Temperature</p>	<ul style="list-style-type: none"> • Blue icon indicates hydraulic oil temperature is below normal • Black icon indicates hydraulic oil temperature is normal (120°F-170°F / 49°C-77°C) • Red icon indicates high hydraulic oil temperature condition exists • Flashing Red icon indicates action should be taken to alleviate high hydraulic oil temperature condition(170°F / 77°C)
	<p>Hydraulic Oil Level</p>	<ul style="list-style-type: none"> • Red icon will appear when the hydraulic oil level drops below the hydraulic oil level gauge sensor.
	<p>Hydraulic Oil Filter (DP)</p>	<ul style="list-style-type: none"> • A red icon will be illuminated when the differential pressure across the hydraulic return filter reaches 25 psi.
	<p>Gearbox Oil Temperature</p>	<ul style="list-style-type: none"> • A gearbox oil temperature icon will illuminate when the oil temperature reaches 180°F.
	<p>Water in Fuel</p>	<ul style="list-style-type: none"> • A red icon will illuminate when there is too much water in the fuel as sensed by the fuel/water separator.
	<p>Engine Coolant Level</p>	<ul style="list-style-type: none"> • When a low coolant level is reached, the engine will perform a power reduction and a red engine coolant level icon will appear on the circle screen.

Operating

General Operating Precautions

- Prior to operating the machine, read the operator's manual thoroughly and ensure that you understand the safe and proper operation of the machine.
- Use approved personal protective equipment at all times while operating the machine.
- Ensure that there is firefighting equipment and a first aid kit nearby while operating the machine.
- Ensure the cutting area is free of obstructions, people, and or animals prior to operating the machine.
- Always operate the machine from the operator's position.
- DO NOT operate the equipment with anyone in the direct line of the blade.

Emergency Stop

If an emergency condition should arise, the machine is equipped with an emergency stop button located at the bottom left corner of the control box assembly. The emergency stop will shut the engine off allowing the operator to address the emergency condition.

NOTE: Only use the emergency stop in an emergency condition. Do not use it to stop the machine during normal operations.

Activating the Emergency Stop

To activate the emergency stop push the emergency stop button. The engine will shut off and the display panel will indicate that the emergency stop is active.

Deactivating the Emergency Stop

Prior to deactivating the emergency stop, ensure that the machine is back into a safe operating condition. Then turn the emergency stop button clockwise until it springs back into position. The machine can now be restarted.



Emergency Stop

Wheel Drive Control Lever

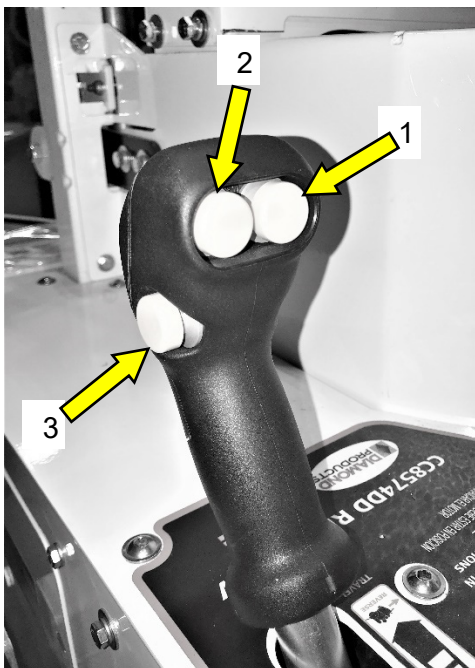
The wheel drive control lever is a part of a mechanical assembly that allows the operator to move the machine in a forward or reverse direction, raise and lower the cutting arm assembly, and activate the horn.



Wheel Drive Control Lever

Control Grip Pushbuttons

The control grip pushbuttons only work with the ignition key at *ON* or with the engine running.



1. Press the *Raise* (1) pushbutton to raise the cutting arm and blade, and release to stop.
2. Press the *Lower* (2) pushbutton to lower the cutting arm and blade, and release to stop.
3. Press the *Horn* (3) pushbutton to activate the horn.

Maneuvering the Machine Forward / Reverse with the Engine Running

NOTE: Prior to moving the machine, read and understand the “Starting the engine and Stopping the engine” section of this manual.

The speed control lever will only move the saw when the engine is running.

NOTE: When maneuvering, always have the cutting arm and blade in the fully raised position to provide proper clearance between the blade and the ground.

1. Turn the ignition switch to the *ON* position.
2. Place the wheel drive control lever in the *STOP/PARK* position.
3. Place the blade speed control lever in the *NEUTRAL* position.

4. Turn the ignition switch to the *START* position until the engine starts, then release the switch. The key will return to the *ON* position.
5. Raise the blade cutting arm by pressing the *Raise* (Left) pushbutton on the control grip until the blade clears the pavement.
6. With the left hand, take the wheel drive control lever out of the *STOP/PARK* position and slowly push it forward to move the machine forward, or to the rear to move the machine in reverse. The machine's speed will increase as the lever is moved farther in either the forward or reverse direction.
7. With the right hand, grasp the steering wheel and turn it clockwise to go right and counter-clockwise to go left.
8. To stop the forward or reverse motion, move the wheel drive control lever to the *NEUTRAL* position and slide the lever into the *STOP/PARK* position notch.

Moving the Machine with the Engine Off

The machine is equipped with a mechanical brake that is integrated into the rear wheel drive motor. The brake defaults to the active position (brake applied) unless released with hydraulic pressure by starting the engine and taking the wheel drive control lever out of the *STOP/PARK* position. The mechanical brake can be manually deactivated to allow the machine to free wheel (move the machine manually) without the engine turned on.

Deactivating the Mechanical Brake



WARNING

Serious injury and/or death could occur if these instructions are not followed.

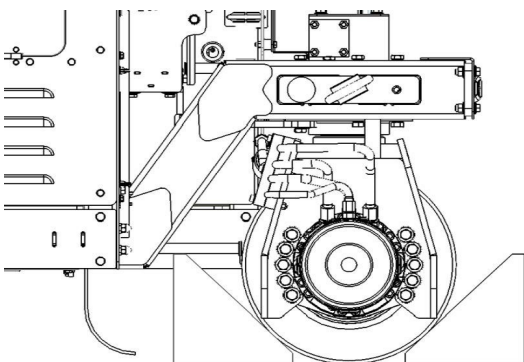
1. Ensure there is no blade installed and that the cutting arm assembly is in the down position.
2. Ensure the engine is *OFF* and cannot be accidentally started while work is being performed.
3. Unlatch and open the service side access door.

4. Locate the "Brake Release kit" bolted to the lower left rear panel of the saw near the battery.

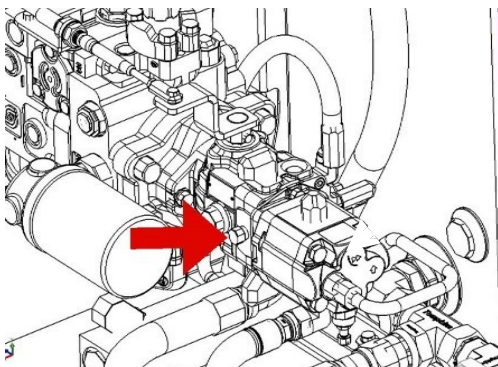


Brake Release Bar with Wrench

5. Unbolt the brake release bar using the provided wrench and set it aside with the hex head bolt, hex nut, and flat washer.
6. Place the wheel drive control lever in the *STOP* or *PARK* position and chock the rear wheel in both directions.

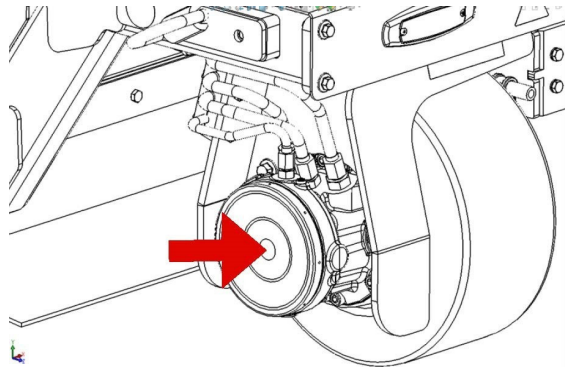


7. Unlatch and lift the front hood.
8. Locate the bypass screw on the wheel drive pump and loosen it no more than two turns.

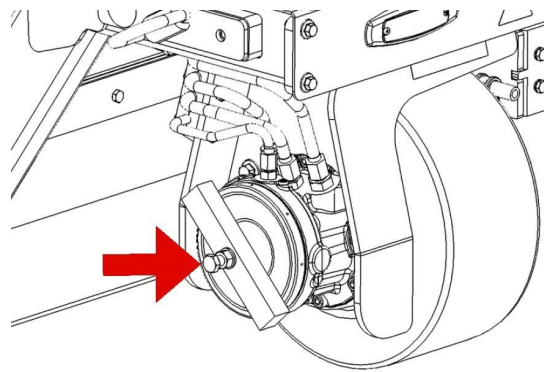


Wheel Drive Pump By- Pass Screw

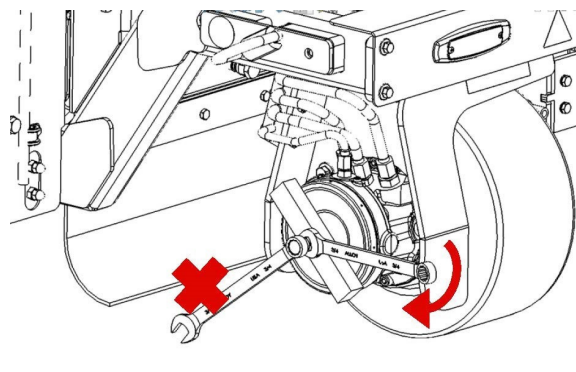
9. At the rear drive wheel, remove the rubber plug from the brake protector at the center of the wheel motor.



10. Place the nut and flat washer on the brake release bolt and insert it through the hole on the brake release bar.
11. Thread the bolt into the brake release motor until it bottoms out.



12. While holding the bolt steady, tighten the nut until the rear wheel turns freely.



13. The mechanical brake is now deactivated and the machine is in a free wheel state.
14. Remove the wheel chocks.

15. The machine can be moved for short distances at very slow speeds.



WARNING

With the manual brake deactivated, DO NOT attempt to manually push the machine while it is on a grade or slope. The machine could roll uncontrolled causing personal injury or property damage

Activating the Mechanical Brake

1. Place wheel chocks under the rear wheel in both directions.
2. Place the wheel drive control lever into the STOP/PARK position.
3. Tighten the by-pass screw located on the wheel drive pump.
4. Hold the brake release bolt steady while loosening the hex nut until the rear wheel no longer turns freely.
5. Remove the brake release bolt, nut, flat washer and brake release bar from the rear drive wheel motor.
6. Replace the wheel drive motor rubber plug with a new plug into the back of the wheel drive motor (DP #2508562).
7. Reinstall the brake release bar onto the lower left rear panel of the saw and tighten it using the provided wrench.
8. Reinstall the wrench next to the brake release bar.
9. Close and latch the access panel door.
10. Close and latch the front hood.
11. Remove the wheel chocks from the front wheels.
12. The brake is now activated and the saw can be started normally.

Blade Speed Control Lever

The blade speed control lever is a part of a mechanical assembly that allows the operator to increase or decrease the blade speed in either an up cut or down cut direction. There are stop bolts that can be set by the operator to return to a consistent blade speed.



Blade Speed Control Lever

NOTE: When operating the blade in an up cut direction, thread the down cut stop bolt in fully to prevent from spinning the blade in the wrong direction.

When operating the blade in a down cut direction, thread the up cut stop bolt in fully to prevent the blade from spinning in the wrong direction

Cutting Arm Lowering Speed

The raise and lower speed for the cutting arm can be controlled using the two flow control valves located on the side panel just below the operator's seat.

The left knob controls the raising speed and the right knob controls the lowering speed. When the knobs are turned clockwise the arm speed will decrease and when the knobs are turned counter-clockwise the speed will increase.



Blade Lowering Speed Valves

Fuel System



WARNING

- Always use caution when refueling.
- DO NOT operate the saw with a fuel leak.
- DO NOT fuel the saw with the engine running.
- DO NOT smoke or expose fuel to open flames when filling the fuel tank or working with fuel.



CAUTION

- Clean up any spilled fuel prior to starting the engine.

Adding Fuel

1. Ensure the engine is *OFF* and the saw is cooled down.
2. Remove the fuel tank cap.



Fuel Tank Cap

3. Fill the fuel tank with ultra-low sulfur diesel fuel only. DO NOT overfill the tank for expansion purposes. Refer to the engine manual for additional information.
4. Replace the fuel tank cap and secure.

Blade Guard



WARNING

DO NOT operate the saw with the blade guard raised or removed.
DO NOT remove the blade guard with the engine running.
Blade exposure should not exceed 180° while cutting.

Always pivot the front of the blade guard 180° (fully upward) so the guard does not swing down unexpectedly, which may cause serious injuries.



Always secure the pivoted section of the blade guard using the detent pin (guards 26" and up).

When pivoting the front of the blade guard, raise/lower it cautiously and slowly to avoid serious injuries.

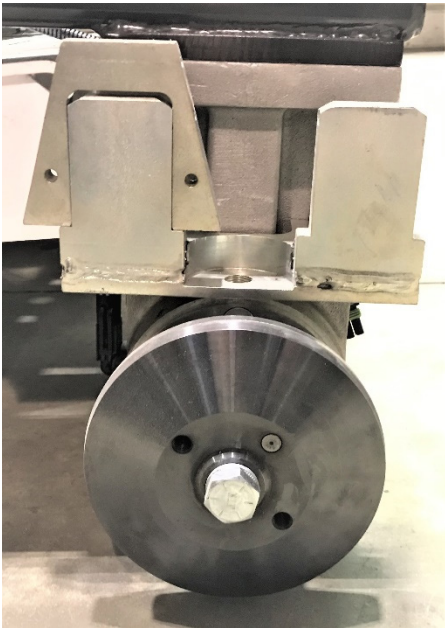
The blade guard shields the blade and must always be in place when operating the saw. Blade guards generally stay in place at all times, except for when changing to another guard size. Regularly inspect the blade guard and water tubes. Clean, repair, or replace dirty or damaged components immediately.

Note: Always use a guard size that matches the blade size. Refer to the parts list for additional information.

Installing the Blade Guard

Always install the blade guard with the blade off the saw.

1. Holding the blade guard handle, face the front of the blade guard forward and fit the tapered mount on the side of the guard onto the tapered mount on the pillow block assembly.



Blade Guard Mount

2. Insert the lock pin through the hole on the tapered frame mount to secure the guard.
3. For guards 36" and up, place a lock washer and then a flat washer onto the blade guard screw. Fit the screw through the slot near the back of the guard and through the hole on the blade guard support bar, and secure the guard to the frame using the provided wrench.
4. Connect one end of the water supply hose to the blade guard water supply manifold and the other to the water supply valve located under the operator's seat.


Removing the Blade Guard

Always remove the blade guard with the blade off the saw.


1. Disconnect the water supply hose from the blade guard water supply manifold.
2. For guards 36" and up, remove the screw from the blade guard support post and blade guard.

3. Remove the lock pin from the tapered frame mount.
4. Use the handle on the blade guard to rock the guard back and forth while lifting the guard off the tapered frame mount.

Diamond Blades

 **WARNING**

- DO NOT exceed the blade's maximum recommended speed when cutting. Excessive blade speeds can cause blade breakage, resulting in serious injuries and/or death.
- DO NOT use damaged blades when cutting to avoid harming yourself, others, or the saw.



Using the proper blade (size and type) preserves the blade and improves efficiency, resulting in lower costs. Refer to the Association of Equipment Manufacturers (AEM) safety brochure for diamond blades and www.diamondproducts.com for additional blade information.

Inspecting the Blade

Inspect each blade prior to installation and discard all damaged blades. Inspect the blades for:

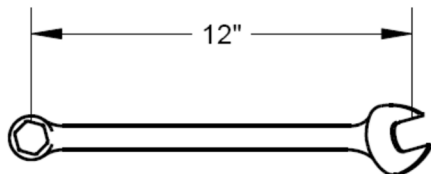
- Cracks, nicks, and dents
- A damaged/deformed arbor (center hole)
- Darkness/discoloration near edge of blade
- A deformed blade circumference
- Segment loss/cracks
- Core wear
- Bending
- Uneven side-widths

Blade Speed

Refer to the CC3538JK RPM Chart, the blade, or the blade packaging information for the recommended blade speeds when cutting. DO NOT exceed the maximum recommended blade speed. DO NOT use a blade for cutting that requires a lower speed than the minimum blade shaft speed.

Wrench

Use the wrench provided when installing or removing a blade. Apply force to the opposite end of the wrench and tighten the blade shaft bolt/screw to 125 ft-lb (169.5 Nm) to secure the outer flange and blade. Verify this measurement with a torque wrench.



Wrench

Installing the Planetary Speed Reducing Gearbox

When operating with blades sizes of 42" and larger, the planetary speed reducing gearbox must be installed. To install the gearbox, the standard pillow block assembly must be removed as follows:

1. Ensure that the blade has been removed from the blade shaft.
2. Start the machine and fully lower the cutting arm.

NOTE: If possible, place some support under the pillow block to take up the weight.

3. Turn the machine off.
4. Disconnect the pillow block sensor assembly wire from the main wiring harness.
5. Unbolt the four 1/2"-13 hex head cap screws attaching the pillow block to the cutting motor.
6. Unbolt the four 1/2"-13 hex head bolts attaching the pillow block to the underside of the cutting arm assembly.
7. Remove the pillow block assembly.

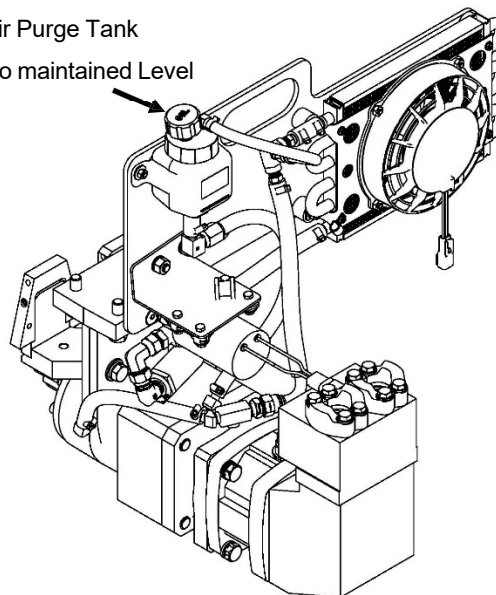
Install the planetary speed reducing gearbox as follows:

1. Bolt the planetary pillow block assembly to the underside of the cutting arm assembly using the four 1/2"-13 hex head cap screws, lock washers, and flat washers.
2. Bolt the gearbox cooling assembly to the inside of the cutting arm using four M10 hex head cap screws, lock washers, and flat washers through the mounting plate.

3. Slide the cutting motor shaft into the gearbox until seated and bolt the cutting motor to the gearbox using four 1/2"-13 hex head bolts, lock washers, and flat washers.
4. Connect the harness ends for the pillow block sensor, temperature switch, oil pump, and fan to the main wiring harness in accordance with the electrical schematic located in the CC8574 Parts List Manual.

Air Purge Tank

No maintained Level



Planetary Speed Reducing Gearbox

NOTE: If the gearbox is being installed for the first time, ensure to add oil in accordance with the maintenance section of this manual.

Removing the Planetary Speed Reducing Gearbox

When operating with blade sizes of 36" or less, the standard pillow block must be installed. If the planetary speed reducing gearbox is mounted on the cutting arm, remove it as follows:

1. Ensure that the blade has been removed from the blade shaft.
2. Start the machine and fully lower the cutting arm.

NOTE: If possible, place some support under the pillow block to take up the weight.

3. Turn the machine off.

4. Disconnect the harness ends for the pillow block sensor, temperature switch, oil pump, and fan from the main wiring harness in accordance with the electrical schematic located in the CC8574 Parts List Manual.
5. Unbolt the four 1/2"-13 hex head cap screws attaching the cutting motor to the gearbox.
6. Unbolt the four M10 hex head cap screws attaching the gearbox cooling assembly mounting plate to the inside of the cutting arm.
7. Unbolt the four 1/2"-13 hex head cap screws attaching the gearbox pillow block from the underside of the cutting arm.
8. Remove the planetary speed reducing gearbox assembly.

Install the standard pillow block assembly as follows:

1. Bolt the pillow block assembly to the underside of the cutting arm using the four 1/2"-13 hex head cap screws, lock washers, and flat washers.
2. Bolt the cutting motor to the pillow block using four 1/2"13 hex head cap screws, lock washers, and flat washers.
3. Connect the pillow block sensor assembly wire to the main wiring harness in accordance with the electrical schematic located in the CC8574 Parts List Manual.

Installing the Blade



WARNING

- DO NOT install a blade with the engine running.
- Failure to properly secure the outer flange and blade may cause parts to loosen or fall off the saw, resulting in serious injuries or death!
- DO NOT pivot the front of the blade guard up or down when installing very large blades. Attempting to pivot the front of a heavy guard when the guard is positioned higher up for blade installation makes the guard difficult to lift and/or lower. In this situation, remove the blade guard front instead of pivoting it.
- Always secure the pivoted section of the blade guard using the detent pin (guards 26" and up).



NOTE: For blades 42" and larger, ensure the speed reducing gearbox is installed on the cutting head.

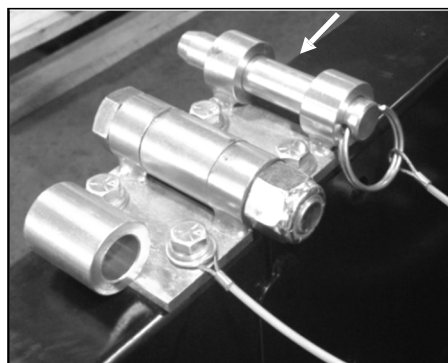


CAUTION

- Wear gloves and be alert to the surrounding environment when handling

1. Select a blade size and type. Remember to check the blade for damages and discard as necessary.
2. Remove the detent pin from the guard hinge and pivot the front of the blade guard 180° (fully upward) to gain access to the blade flanges. For larger, heavier guards that are positioned too high up and are unsafe to pivot, remove the lock nut and screw from the center of the guard hinge and remove the front of the guard.

Note: Have a second trained operator hold the guard in place while removing the hinge screw and nut.



Detent Pin

3. On the pivoted guards, insert the detent pin through the interlocking barrels on the top of the guard to secure the front of the guard.



WARNING

Failure to fully pivot and secure the front of the guard may cause serious injuries..

4. Remove the blade shaft bolt and wedge lock washer. Note: clockwise loosens on right side.
5. Carefully remove the outer flange. Inspect the flange assembly and clean or replace dirty/damaged components.

6. Place the blade against the inner flange. For large blades, carefully roll the blade up to the inner flange. Adjust the height of the saw to align the flange and blade arbor.

NOTE: Point the arrow printed on the blade in the direction of the blade shaft's rotation.

7. Align and fit the outer flange and flange pin through the blade and into the inner flange and blade shaft.

NOTE: The outer flange should fit snug with the blade, inner flange, and blade shaft.

8. Slightly rotate the outer flange and blade backward to eliminate backlash (looseness) between parts.
9. Place the wedge lock washer onto the blade shaft. Ensure that the washer has the ramp wedges facing each other with the finer serrations on the outside.
10. Insert the screw into the blade shaft through the center of the outer flange.
11. Tighten the screw by hand. Slowly lower the cutting arm assembly until the blade just touches the ground.
12. Tighten the screw again, using the wrench, to 125 ft-lb (170 Nm) minimum to secure the outer flange and blade.
13. Remove the detent pin from the guard hinge and pivot the front of the guard down over the blade to secure.
14. If replacing the front of the guard, fit the front and back of the blade guard together. Place the screw through the center of the guard hinge and tighten the lock nut to the other end of the hinge screw to secure the guard together.

NOTE: Have a second trained operator hold the guard in place while replacing the hinge screw and nut.

Removing the Blade



CAUTION



- DO NOT remove a blade with the engine running.
- DO NOT pivot the front of the blade guard up or down when removing very large blades. Attempting to pivot the front of a heavy guard when the guard is positioned higher up for blade removal makes the guard difficult to lift and/or lower. In this situation, remove the blade guard front instead of pivoting it.
- Always secure the pivoted section of the blade guard using the detent pin (guards 26" and up).

1. Remove the detent pin from the guard hinge and pivot the front of the blade guard 180° (fully upward) to gain access to the blade. For larger, heavier guards that are positioned too high up and are unsafe to pivot, remove the lock nut and screw from the center of the guard hinge and remove the front of the guard.

NOTE: Have a second trained operator hold the guard in place while removing the hinge screw and nut.

2. On the pivoted guards, insert the detent pin through the interlocking barrels on the top of the guard to secure the front of the guard.



WARNING

Failure to fully pivot and secure the front of The guard may cause serious injury.

3. Slowly lower the cutting arm assembly until the blade just touches the ground.
4. Remove the blade shaft screw using the wise loosens on right side.

- Carefully remove the outer flange and blade. Place the blade in an appropriate storage location.

NOTE: If the outer flange is difficult to remove, tighten a setscrew into two of the holes on the outer flange to help separate the outer flange from the blade.

- Inspect the flange assembly and clean or replace dirty/damaged components.
- Carefully fit the outer flange back into the inner flange and/or blade shaft.
- Place the lock washer and then the flat washer onto the blade shaft screw and insert the screw into the blade shaft through the center of the outer flange.
- Retighten the blade shaft screw to secure the flanges.
- Remove the detent pin (guards 26" and up) from the guard hinge and pivot the front of the guard down over the blade flanges to secure.
- If replacing the front of the guard, fit the front and back of the blade guard together. Place the screw through the center of the guard hinge and tighten the lock nut to the other end of the hinge screw to secure the guard together.

NOTE: Have a second trained operator hold the guard in place while replacing the hinge screw and nut.

Engine



WARNING



- Operate the saw in well-ventilated areas. Concentrated engine exhaust can cause loss of consciousness and/or death.
- DO NOT touch the engine/muffler with the engine running, and always let them cool down prior to touching or servicing the saw.
- DO NOT leave the saw unattended while the engine is running.

Tasks Prior to Starting the Engine

Complete the following tasks prior to starting the engine to ensure a safe start:

- Check fluids and fill to appropriate levels.
- Turn off controls and switches.
- Remove tools from area.

The engine will not start unless the following tasks are completed:

- Operator must be seated.
- Place wheel drive control lever to the STOP/PARK position.
- Place the blade speed control lever into the NEUTRAL position.
- Pull out the emergency stop button.
- All emergency stop triggers are cleared:
 - E-Stop active
 - Low coolant level

Starting the Engine

Notice: In an emergency, press the emergency stop button to immediately stop the engine and any saw movement!

NOTE: The "AUXILIARY" position on the ignition switch will energize all of the same circuits that are energized when it is taken to the "ON" position. The only difference is that when the switch is released, it will return to the "STOP" position and all of the circuits will de-energize.

- Insert the key into the ignition and turn it to the ON position.
- When the "Select Blade Size" screen appears on the display, turn the ignition key to the START position, release when the engine starts.

NOTE: If the engine does not start within 10 seconds, turn off the key and try again approximately 30 seconds later. Refer to the engine manual for troubleshooting recommendations after several failed attempts.

- Let the engine warm up. Check all warning lights and turn off the engine immediately if there are any problems prior to operating the saw.
- Increase/decrease the engine/blade speed by pressing the throttle switch up or down as needed.

Stopping the Engine



CAUTION

DO NOT leave the saw unattended until the engine is off and the blade has stopped spinning.

1. Place the blade speed control lever into the STOP position and raise the blade from the cut.
2. Place the wheel drive control lever into the STOP/PARK position.
3. Turn off all controls, switches, and water.
4. Decrease the engine speed to idle for five minutes to cool down the engine after full load operation.



CAUTION

Failure to cool the engine down may result in engine damage

5. Turn the ignition key to the STOP position and remove the key.

Control Panel Display

Normal Operation

The control panel display is located forward and left of the operator. This location provides for convenient control while maintaining a visual perspective of the cutting process.

There are three basic sections to the control panel. The first section on the left side of the panel provides the control switches for various saw functions. These functions include operation of the top and bottom spot lights, strobe lights, horn, throttle control, and optional water pump. The second lower section of the panel provides the emergency stop button and the ignition switch. The third section is the control display panel which is covered in detail in the "Control Display" section of this manual.



Control Panel

Water Supply (Non Water Pump)

The water supply directs cooling water to the blade and minimizes dust when cutting. The water supply hose connection is located under the operator's seat to the rear of the saw.

A water control valve, located next to the operator's seat on the left hand side allows the operator to start and stop the flow of water to the blade.

Using the Water Supply

1. Ensure the water control valve is in the CLOSED position.
2. Connect a hose from the water supply to the high pressure water supply hose connection located under the operator's seat.
3. Connect the hose from the water control valve to the water manifold on the blade guard.



High Pressure Water Hose Connection

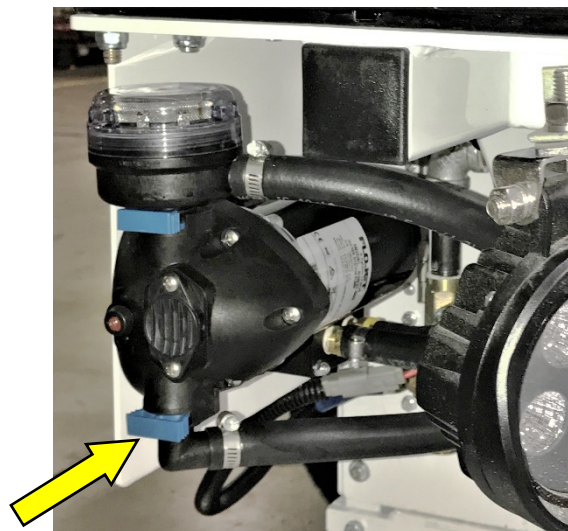


Water Control Valve (Closed Position)

4. If a water pump is installed, close the water pump isolation valve to prevent back pressurizing the pump.
5. Start the flow of water from the source to the saw.
6. To start the flow of water to the blade guard, open the water control valve by rotating the valve handle toward the rear of the saw. The valve is fully open when the handle is in line with the water line.
7. To stop the flow of water to the blade guard, rotate the water control valve handle until it is fully closed.
8. Shut the water off from the source.

Water Supply (Optional Water Pump)

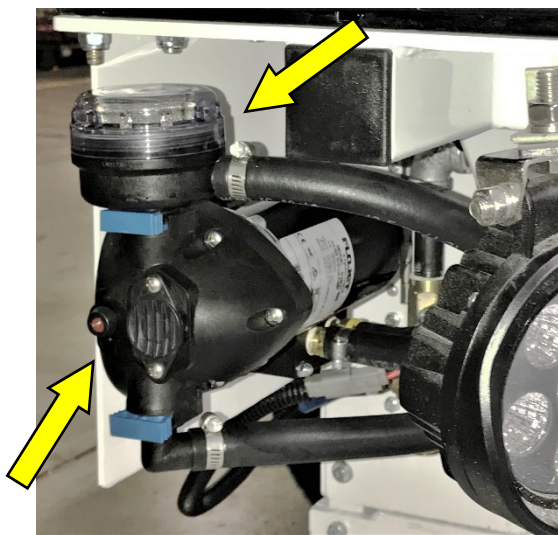
When a pressurized water source is not available, an optional water pump can be used to direct water to the saw blade. The water pump has an inlet strainer to filter out any debris. There is a recirculation line on the discharge side of the pump that contains a 10 psi check valve to recirculate water back through the pump if the water pump isolation valve is closed.



Discharge Hose Drain Line Connection

Water Pump Operation

1. Connect the water supply hose from a non-pressurized water source (less than 10 psi at the pump inlet) to the low pressure water pump inlet fitting located behind the operator's seat.



Water Pump and Inlet Filter

NOTE: To minimize operational hours on the water pump, turn the pump OFF at the switch if the water pump isolation valve is closed for an extended period of time.

When not in use, disconnect the discharge hose from the pump to allow water to drain from the discharge side to prevent freezing.



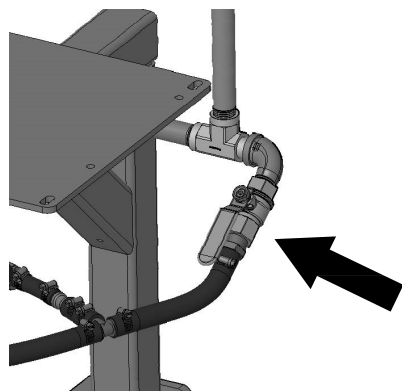
Low Pressure Water Pump Inlet

2. Ensure the water pump discharge hose is connected.
3. Ensure that the water control valve located next to the operator's seat on the left hand side is open.



Water Control Valve (ON Position)

4. Ensure that the water pump isolation valve located underneath and to the front of the operator's seat is open.



Water Pump Isolation Valve (ON Position)

5. Start the flow of water from the water source to the water pump manifold.
6. Turn on the water pump switch, located on the control panel, to start the pump. DO NOT start the water pump until just before cutting. DO NOT leave the water pump on when the engine is OFF to avoid draining the battery.
7. Adjust the water control valve to regulate the flow of water to the blade guard.
8. When cutting is complete, turn off the water pump switch.
9. Shut the water off from the source.
10. Disconnect the hose from the discharge side of the pump to drain any water from the lines. This will prevent any water from freezing and damaging the pump or any components.

High Pressure Operation with the Water Pump Installed

When operating the water supply system using a high pressure water source with the water pump installed, ensure the following:

1. Supply hose is connected to the high pressure water hose connection
2. The water pump isolation valve is closed.

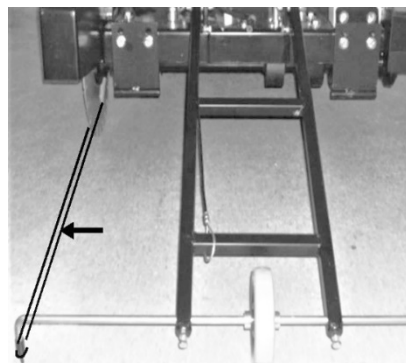
Cutting

Adjusting the Front Pointer

NOTE: Reference Appendix B for engine and blade speeds

1. Remove the lanyard from the cable cleat.
2. Lower the front pointer frame to the round.
3. Loosen both front pointer frame screws.

4. Divide an 8–10 ft. piece of string in half.
5. Place the looped end of string into a gullet on the backside of the blade.
6. Place one string line up against the backside of the blade and one string line up against the front side of the blade. Holding the string ends in one hand, tension the lines out toward the front pointer rod.



Tensioned String Line

7. Adjust the pointer rod to place the tip between the tensioned string lines.
8. Retighten both front pointer frame screws.
9. Lift the frame off the ground when finished.
10. Tension the lanyard and secure it to the cable cleat.

Straight Line Cutting



WARNING



- DO NOT expose yourself or anyone else to the direct line of the blade when operating the saw.
- The direct work area should not contain buried or embedded electrical, gas, or water lines that could be damaged and/or cause personal injury while cutting.

Note: Always raise the blade to provide proper clearance between the blade and the ground when maneuvering the saw.

Helpful Hints Prior to Cutting

Keep the following in mind for better efficiency while cutting:

Use just enough handle pressure to guide the saw down the cutting line. DO NOT forcibly direct (twist) the saw from side to side when cutting. DO NOT jam, cock, or wedge the blade in a cut.

- Moving too quickly when cutting may stall the saw, or may cause the blade to climb out from the cut. If the saw stalls while cutting, put the blade pump and wheel drive levers in neutral before restarting the engine. When the engine has been restarted, raise the blade from the cut and then start the blade using the blade pump lever.
 - Avoid sawing excessively deep to preserve the blade and reduce sawing costs.
 - DO NOT lower the blade too quickly or move the saw forward too quickly when finishing a partial-cut to avoid forcing the blade into the concrete.
 - Always have a proper water flow when cutting for maximum blade efficiency. Using too much water when cutting will make the slurry look clear. Not using enough water will make the slurry look thick and pasty.
 - Refer to the Diamond Products' Guide for Professional Concrete Cutters for additional cutting tips and information.
7. Slowly lower the blade into the surface to no more than 2" deep. Make the initial pass across the entire cutting line using the most effective travel speed. If the blade is coming up out of the cut, decrease travel speed and/or feed depth. **DO NOT CUT FULL DEPTH IN ONE PASS.**
 8. If you are cutting more than 2" deep, you can finish the job in less time and effort by step cutting in 2" increments. Cut a 2" depth on the initial pass, 4" depth on the second and so on. On repeated passes, the blade will tend to follow the previous cut.
 9. Raise the blade out of the cut and reposition the saw at the start of the cut line. DO NOT move backwards with the blade in a previous cut.
 10. At the start of the cut line, lower the blade back into the cut and make a second, deeper pass across the entire cutting line.
 11. Continue the step-cut process to reach the maximum depth. DO NOT cut any deeper than required.

Tasks Prior to Cutting

- Complete the following tasks prior to cutting:
- Ensure the blade size and type is correct for the job.
- Align the front pointer with the blade.
- Clearly mark the cutting line.
- Turn off all electricity, gas, and water around the direct work area.

Making a Cut without Using the Blade Depth Stop

1. Align the blade and cutting guide(s) with the cut line.
2. Turn on the water and adjust the water flow by rotating the water control valve handle back toward the rear of the saw.
3. Start the engine and allow to idle briefly before going to full power.
4. Engage the blade speed control lever in the direction required for the cutting operation (forward for down cutting, backward for up cutting).
5. Increase the blade speed to the correct operating speed for the selected blade size.
6. Lower the blade to just above the cutting surface and set the cutting depth indicator at zero.

Making a Cut Using the Blade Depth Stop

1. Align the blade and cutting guide(s) with the cut line.
2. Turn on the water and adjust the water flow by pushing the water valve handle toward the rear of the saw.
3. Start the engine and allow to idle briefly before going to full power.
4. Engage the blade speed control lever in the direction required for the cutting operation (forward for up cutting, backward for down cutting).
5. Increase the blade speed to the correct operating speed for the selected blade size.
6. Lower the blade to just above the cutting surface and zero the blade by pressing the "Zero Blade" function key on the left side of the display panel.
7. Slowly lower the blade into the surface to no more than 2" deep and press the "Set Blade Depth" function key on the left side of the display panel. Make the initial pass across the entire cutting line using the most effective travel speed. If the blade is coming up out of the cut, decrease travel speed and/or feed depth. **DO NOT CUT FULL DEPTH IN ONE PASS.**

8. If you are cutting more than 2" deep, you can finish the job in less time and effort by step cutting in 2" increments. Cut a 2" depth on the initial pass, 4" depth on the second and so on. On repeated passes, the blade will tend to follow the previous cut.
9. Raise the blade out of the cut and reposition the saw at the start of the cut. DO NOT move backwards with the blade in a previous cut.
10. Press the "Clear Depth Stop" function key on the left side of the display panel to reset the depth stop to zero.
11. Slowly lower the blade into the cut until the desired depth is reached and then press the "Set Depth Stop" function key on the left side of the control panel.
12. Continue the step-cut process using the depth stop to reach the maximum depth. DO NOT cut any deeper than required.

Continuing a Partial-Cut

1. Maneuver the saw to the desired location.
2. Align the blade with the previous cut and slowly lower the blade back into the concrete. Use extreme caution to make sure the blade is perfectly aligned within the cut. DO NOT continue cutting until the blade is aligned within the cut!
3. Continue the step-cut process (using the blade depth stop if preferred) to reach the maximum depth. DO NOT cut any deeper than required.

Finishing a Cut

1. Place the wheel drive control lever at STOP/PARK.
2. Raise the blade from the cut (provide proper ground clearance).
3. Move the blade speed control lever to NEUTRAL to stop the blade rotation.
4. Turn off the water control valve.
5. Always operate the engine briefly at idle speed before stopping it (approximately 5 minutes).
6. Turn the engine off by turning the ignition switch to the STOP position.

NOTE: Turning the engine off will result in a loss of blade depth settings

Spotlights

There are two spotlights available to provide work area lighting. The top spotlight is located on the steering upright assembly. To operate the top spotlight follow the steps below:

1. Loosen the spotlight bar lock knob and slide the spotlight bar up to adjust the length of the bar.
2. Tighten the lock knobs to secure.
3. Turn the spotlight switch on or off from the control panel as needed for additional lighting.



Top Spotlight

The bottom spotlight is located directly underneath the operator's seat. To operate the bottom spotlight, follow the steps below:

1. Loosen the spotlight bar lock knobs and slide the spotlight bar up to adjust the length of the bar.
2. Tighten the lock knobs to secure.
3. Turn the spotlight switch on or off from the control panel as needed for additional lighting.



Bottom Spotlight

Strobe Light

An amber strobe warning light is provided on the saw for visibility safety. The strobe light is located on the steering upright assembly next to the top spotlight.

1. Loosen the spotlight bar knob and slide the strobe light up to adjust the length of the bar.
2. Tighten the lock knob to secure.
3. Turn the strobe light switch on or off from the control panel as required.



Strobe Light

Tie-Downs

There are four D-ring tie-downs (two at the back and one on each side toward the front end of the saw) available for securing the saw in a truck/trailer for transportation. **DO NOT** over-tighten a chain/rope to the front end tie-down, which may bend the frame and damage the saw. The tie-downs locations are marked with the following symbol:



Umbrella

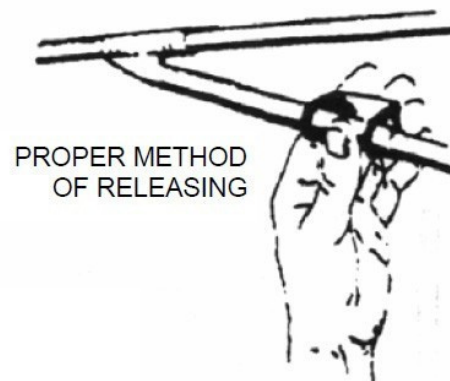
Opening the Umbrella

1. Insert the swivel ball locking handle into the umbrella support shaft.
2. Align the holes and insert the two bolts into the holes and secure with lock nuts.
3. Raise each bow individually until locked into position.

NOTE: Each bow has two positions in which it can be locked open. This is to allow for canvas stretch.

Closing the Umbrella

1. Squeeze the release tab on each bow to unlock and close.



Umbrella Release Tab

Maintenance

General

Failure to read and comply with the maintenance instructions provided in this manual prior to performing maintenance may result in serious injuries and/or death, and may harm the saw. DO NOT attempt to perform maintenance on the saw if you are not properly trained for it, or are not supervised by an experienced person.

Refer to the CC8574DD Parts List for additional information and part diagrams when performing maintenance tasks. Refer to the engine manual and manufacturer as the primary source for all safety, operations, and maintenance instructions for the engine. Contact the saw and/or engine manufacturer with any additional questions.

Remove all necessary guards and access panels prior to servicing the saw. Replace prior to operating.

Maintenance Tools

A wrench holder located in the cutting arm assembly contains a 15/16" open end wrench. The wrench is used to install and remove cutting blades from the saw.

For wheel brake release tools and instructions go to: "Deactivating the Mechanical Brake" operation located in the Operating section of this manual.

Pre Maintenance Preparations

- Ensure the saw is in a safe area to conduct maintenance.
- Maintain proper cleanliness of the work area to minimize personnel injury or equipment damage.
- Ensure the saw is sufficiently cool to conduct any maintenance.
- Remove the cutting blade prior to starting any maintenance.
- Place the saw on a level surface with the engine turned off and the emergency stop activated.

- Ensure there is adequate lighting in the work area to ensure safety.
- Ensure all equipment and tools required for the maintenance task are staged and available for use.
- Prior to any maintenance being performed, know the locations of all safety equipment such as fire extinguishers, first aid kits, etc.
- All maintenance shall be performed by qualified personnel only.

General Cleaning

The saw must be cleaned after each use and prior to conducting any maintenance. Ensure that the saw is cool prior to cleaning. Ensure affected electrical equipment is properly covered or de-energized prior to cleaning with water or air.

Cleaning Techniques

Various cleaning options can be utilized depending on the type of cleaning required. High pressure washers and a mild detergent will work the best. Compressed air and low pressure water can also be utilized where required.



CAUTION

Care must be taken when using high pressure water and compressed air to conduct any maintenance or cleaning. High pressure water and compressed air can cause injury to personnel or damage

Radiator

Ensure that the radiator is cool prior to cleaning. Use compressed air to clean the radiator fins being careful not to damage the fins. A mild detergent with low pressure water can also be used to degrease the radiator.

NOTE: Damaged radiator fins can and will diminish the cooling capacity of the radiator.

Control Panel

Do not spray water on the control panel to clean. Use a damp cloth or compressed air to clean electrical components. Dry the control panel after cleaning.

Engine

Use a mild detergent and water to clean the engine. Do not spray water forcefully on the engine to prevent damage to components.

NOTE: Do not spray water into the exhaust pipe or air filter.

Part Lubrication



WARNING

DO NOT grease parts with the engine running.

Lubricate all necessary parts on schedule for maximum saw efficiency. Occasionally lubricate controls, cables, and linkages with a spray lubricant when movement becomes stiff and/or sluggish. Use one to two full pumps of NLGI No. 2 premium, lithium-based grease when lubricating all grease fittings. Note: Use more grease on bearing grease fittings if they are too hot to touch after completing work.

Post Cleaning

- Lubricate the machine as required.
- Dry all electrical components using compressed air. Do not start the machine until it has had time to thoroughly dry.

Service Schedule

The service schedule is based primarily on the standard operating time of the machine. The frequency of the maintenance tasks can be increased based on the working environments of the machine.

Task	Cycle							
	Daily	100 Hrs.	250 Hrs.	500 Hrs.	1000 Hrs.	1 Yr.	2 Yrs.	3 Yrs.
Visually inspect saw for damage and repair as necessary	X							
Wipe down and clean all components for dust, debris, and slurry	X							
Check that all safety guards and covers are in place	X							
Check for loose or frayed wiring. Repair/replace as necessary	X							
Check for loose nuts and bolts and retighten	X							
Inspect all hoses and piping for damage, leaks, or looseness and repair/replace as necessary	X							
Check engine oil level	X							
Check fuel level	X							
Check hydraulic fluid level	X							
Check radiator coolant level	X							
Check and clean blade guard water spray tubes	X							
Check air cleaner restriction indicator	X ¹							
Drain fuel pre-filter water separator	X ¹							
Clean the planetary gear cooling assembly in-line oil suction filter and replace		X						
Replace engine oil and filter			X ²					
Replace hydraulic oil and charge pump filters				X ³				
Replace secondary fuel filter				X				
Replace outer primary and inner safety air filters				X ⁴				
Replace fuel pre-filter					X ⁵			
Grease front wheel hubs						X		
Replace radiator coolant							X	
Replace V-rib belt and tensioning pulley								X

1 - Service as required

2 - Initially change at 50 operating hours

3 - Or when prompted by the display panel

4 - Inner safety filter is changed every 500 hrs. or every three outer primary filter changes

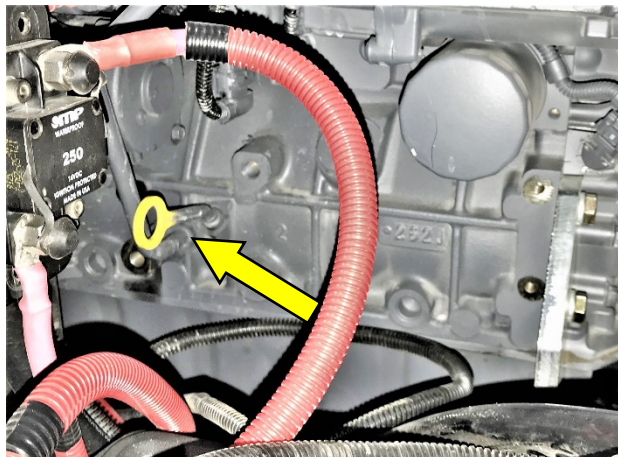
5 - Or 1 year whichever occurs first

Daily Service

Check Engine Oil Level

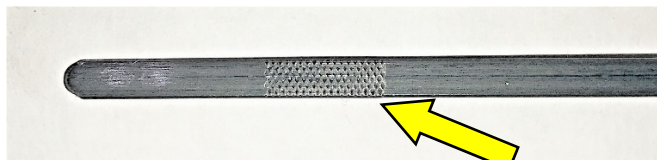
Prior to checking the engine oil level, ensure that the engine is off and has had adequate time to cool down.

1. Open the service side access door located on the left side of the saw.
2. Remove the engine oil dipstick from the side of the engine.



Engine Oil Dipstick

3. Check the oil level on the dipstick. The level should be within the knurled mark.



Engine Oil Level Indication

4. If the level is low, remove the access cover plate located on the engine cover panel to access the oil fill cap.



Engine Oil Fill Cap

5. Using a funnel, add oil, in accordance with the "Specifications" table located in the Introduction section of this manual, until the level is correct.
6. Replace the engine oil fill cap.
7. Replace the access cover plate.
8. Close the service side access door.

Check Fuel Level

Ensure that the saw in the STOP/PARK position and the operator is sitting in the seat.

1. Turn the ignition switch to the ON position. The fuel level gauge will be displayed in the lower center of the tachometer gauge.
2. If fuel level is low, turn the ignition switch to STOP and remove the fuel tank fill cap located on the top of the fuel tank.



Fuel Tank Fill Cap

3. Fill the fuel tank with ultra-low sulfur diesel fuel only.
4. Replace the fuel tank fill cap.

Hydraulic System



WARNING



- Always place a piece of cardboard or paper up against hydraulic components, or use a leak detection fluid to check for hydraulic fluid leaks. Keep all body parts away from leaks and/or areas that may eject hydraulic fluid. Pressurized hydraulic fluid can penetrate the skin, causing serious injuries. Seek medical attention immediately!
- Always make sure any hydraulic components being serviced are not supporting the weight of other saw components. If a particular component is under pressure when connections points are loosened, oil may spray out forcefully.

Inspect all hydraulic hoses and fittings daily for leaks. Remember to use cardboard or a piece of paper when checking for leaks and replace damaged components immediately.

Check Hydraulic Fluid Level

Prior to checking the hydraulic fluid level, ensure that the engine is off, has had adequate time to cool down, and is parked on a level surface.

1. Check the hydro pump reservoir tank level using the sight gauge located on the back side of the tank.



Hydraulic Reservoir Sight Gauge

2. If the level is below the "Fill" line then, remove the reservoir tank cap.
3. Add hydraulic oil or equivalent, in accordance with the "Specifications" table located in the Introduction section of this manual, to the reservoir tank "Fill" line. DO NOT overfill.
4. Replace the cap and tighten to secure.

Check Radiator Coolant Level

Check the radiator coolant level daily and whenever a "Low Coolant Level" message appears on the display screen.

Prior to checking the radiator coolant level, ensure that the engine is off and has had adequate time to cool down.

The coolant system on the CC8574DD is a pressurized system. Care must be taken when servicing the system.



CAUTION

Remove the coolant expansion tank cap only when it feels cool to the touch, and always open it slowly to relieve any built up pressure.

1. Remove the coolant expansion tank cap.
2. Add coolant, in accordance with the "Specifications" table located in the Introduction section of this manual, to the expansion tank. Fill only to the bottom of the fill tube, approximately 50% of tank capacity, to ensure enough air volume is present for coolant expansion.
3. Replace the coolant expansion tank cap and tighten to secure.



Coolant Expansion Tank

Check and Clean Blade Guard Spray Tubes

1. Raise the front of the blade guard and pin it in place using the hinge detent pin.
2. Connect a water supply source to the water manifold on the blade guard.
3. Ensure the water valve is in the closed position and turn the water supply on.
4. Open the water valve verify that water is spraying from all spray tube holes.
5. If any clogged holes are detected, close the water valve.
6. Dislodge any debris that is clogging the hole(s).
7. Open the water valve and verify all spray tubes are clear.
8. Close the water valve.
9. Shut off water supply and disconnect from the water manifold.
10. Pull the detent pin on the blade guard hinge and lower the front of the guard back down.
11. Replace detent pin.

Check Air Cleaner Restriction Indicator

1. Check the restriction indicator located on the outlet to the air cleaner.



Restriction Indicator

2. If the indicator is red, clean the air cleaner outer primary filter in accordance with the "Clean the Outer Primary Air Filter" procedure.
3. Ensure the rubber dust ejector boot valve is clean by pressing inward on both sides of the ejector boot near the valve opening to release dust and debris, and clean the valve opening as necessary.



Rubber Dust Ejector Boot

Clean the Outer Primary Air Filter



WARNING

DO NOT operate the saw without the air filter installed

1. Empty the rubber dust ejector boot by pressing inward on both sides of the ejector boot. This will release any large particles of dust or dirt.



Rubber Dust Ejector Boot

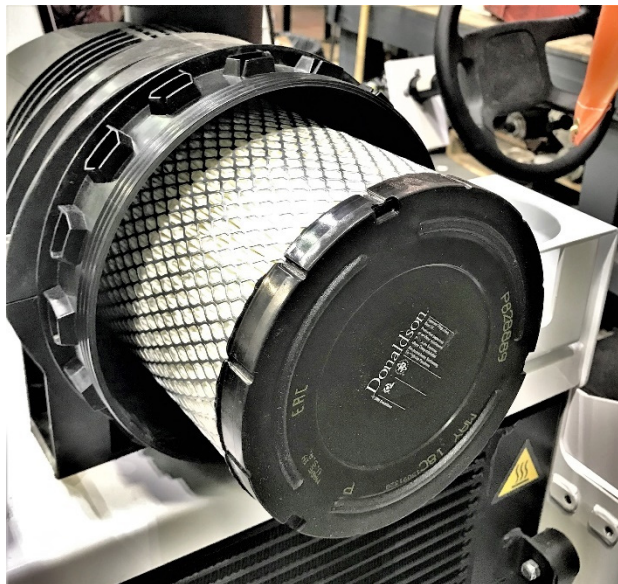
2. Pull out the tab on the air cleaner housing end cover.



Air Cleaner End Cover Cap

3. Turn the end cover counter-clockwise to unlock and pull the cover away from the main air cleaner housing.
4. Pull the outer primary filter element out of the air cleaner and inspect it for damages. If it is damaged or heavily soiled replace the filter.

NOTE: To protect the engine, **DO NOT** pull out the inner safety filter.



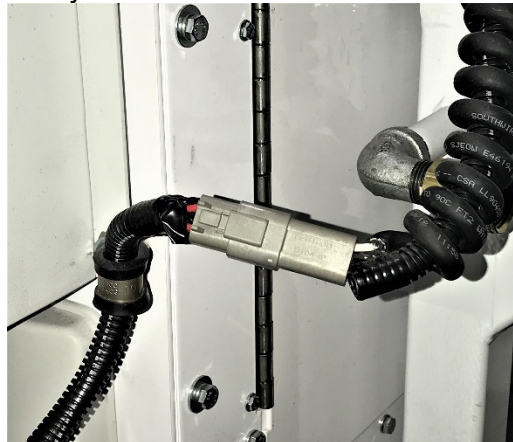
Outer Primary Filter

5. If the filter is only slightly soiled, move away from the saw and clean the filter from the inside out. Use dry compressed air to clean the filter (a maximum of 30 psi or 2.1 bar) and rotate it while cleaning. **DO NOT** wipe the sealing surface of the filter as this contains a dry lubricant to help seal the filter inside the housing.
6. Inspect the inside of the air cleaner housing and the end cover for debris, and wipe them down with a damp cloth as necessary. **DO NOT** use compressed air to blow out the inside of the air cleaner housing. **DO NOT** allow dust to enter the air intake tube when cleaning or replacing parts.
7. Place the filter into the air cleaner housing (over the inner safety filter) and gently push the filter into the unit until it feels secure.
8. Place the end cover tightly up against the ridge at the end of the air cleaner housing.
9. Turn the end cover clockwise to lock the cover onto the air cleaner housing, making sure the dust ejector boot is in the downward facing position.
10. Push the tab in on the air cleaner housing end cover to secure.
11. Press the restriction indicator reset button on the restriction indicator after the unit has been cleaned.

Drain the Fuel Pre-Filter Water Separator

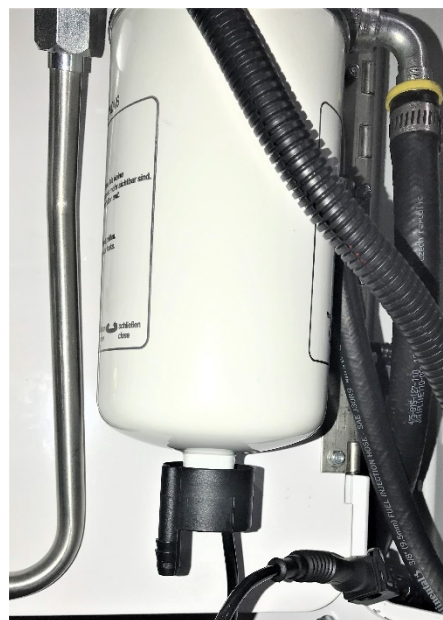
Drain the fuel pre-filter daily. The pre-filter is located on the inside of the fuel door assembly.

1. Ensure the engine is turned off and the saw frame is level.
2. Disconnect the water supply hose to the blade guard at the water valve.
3. Disconnect the wire harness to the seat safety switch.



Wire Harness, Seat Safety Switch

4. Using a 17mm wrench, unbolt the three hex head bolts attaching the seat mount to the frame base.
5. Rotate the seat back enough to clear the fuel door.
6. Unlatch and open the fuel door.
7. Locate the drainage cap on the underside of the pre-filter water separator.
8. Loosen the cap only enough to allow water to be discharged from drainage tube. Do not remove the cap.



Fuel Pre-Filter Cap

9. When no more water is discharged, re-tighten the drainage cap.

10. Close and latch the fuel door.
11. Rotate the seat back into position, reinstall the three hex head bolts and tighten to secure.
12. Reconnect the wire harness to the seat safety switch.
13. Reconnect the water supply hose from the blade guard to the water control valve.

100 Hour Service

Cleaning the Gearbox Cooling Assembly In-Line Oil Suction Filter

Clean the in-line oil suction filter every 100 hours. Replace the filter when it cannot be properly cleaned or is damaged.

1. Place a drain pan underneath the filter.
2. Use a wrench to disconnect the swivel elbow fitting at the outlet of the filter from the inlet fitting to the pump.
3. Use another wrench on the filter outlet barrel flats and loosen the barrel from the swivel elbow.



In-Line Oil Suction Filter

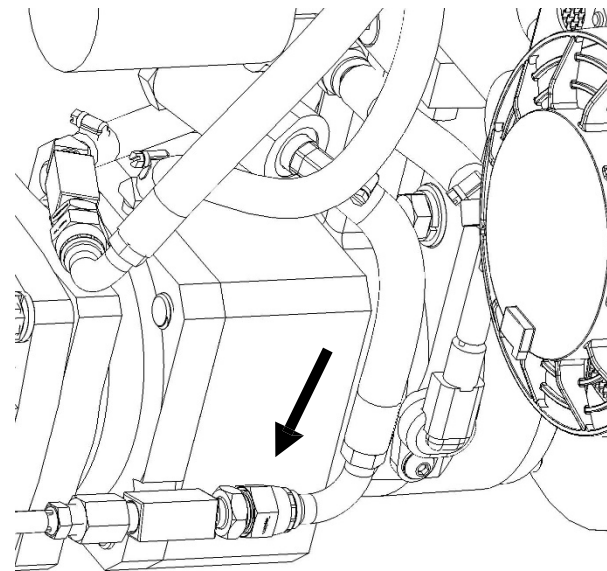
4. A very small amount of oil may drain. Dispose of the used oil according to city, state, and federal regulations.
5. Remove the spring and bronze element from the barrel. Clean the inside of the barrel and the bronze filter element using an industrial cleaning solvent. Replace the filter if damaged or not cleanable.
6. Fit the bronze filter inside the spring and place the assembly back into the filter barrel.
7. Retighten the swivel elbow fitting to the filter barrel.
8. Reconnect the swivel elbow fitting to the inlet fitting for the pump and tighten.

Replacing the Oil in the Planetary Speed Reducing Gearbox

NOTE: If it is known that the planetary speed reducing gearbox has no oil in it, proceed to the "Adding Oil to the Planetary Speed Reducing Gearbox" procedure in this section of the manual.

Draining Oil from the Planetary Speed Reducing Gearbox

1. Raise the cutting arm assembly to the full up position and turn the engine OFF.
2. Place a suitable oil drain receptacle under the planetary gearbox housing.
3. Disconnect the 1/2" 90° JIC fitting from the 1/4" tee located on the gearbox housing upstream of the mini in-line filter and allow the gear oil to drain into the receptacle.

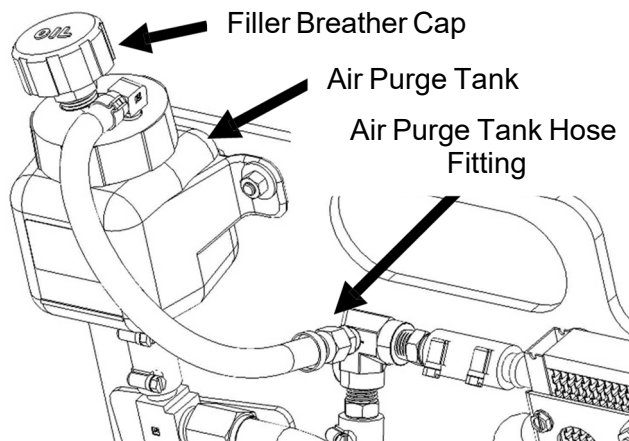


90° JIC Fitting,

4. When all oil has drained, wipe the fitting off and reattach the 1/2" 90° elbow back to the 1/4" tee and tighten to secure.
5. Dispose of the oil in accordance with all city, state, and federal regulations.
6. Add oil the gearbox in accordance with the "Adding Oil to the Planetary Speed Reducing Gearbox" procedure in this section of the manual.

Adding Oil to the Planetary Speed Reducing Gearbox

1. Ensure the engine is OFF.
2. Disconnect the air purge tank hose at the 1/4" JIC fitting attached to the 1/4" elbow on the discharge side of the cooler.



3. Unscrew the air purge tank cap.



CAUTION

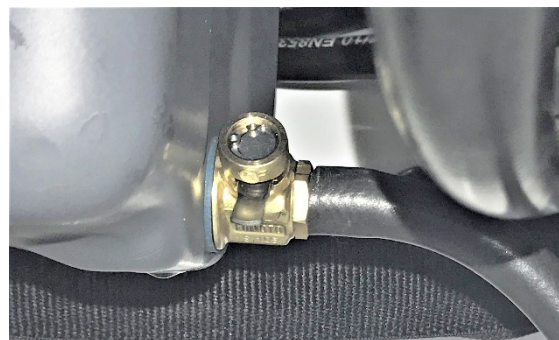
Do not remove the filler breather cap from the air purge tank cap as this may damage the threads.

4. Fill the air purge tank with synthetic ATF, 0W-20, in accordance with the specifications called out in the Introduction section of this manual.
5. Screw the air purge tank cap back onto the tank.
6. Attach the 1/4" JIC fitting back on to 1/4" elbow on the discharge side of the cooler and tighten to secure.

250 Hour Service

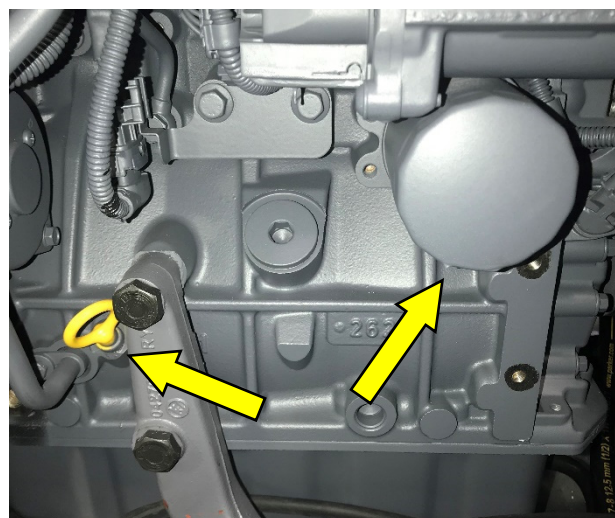
Replace Engine Oil and Filter

- Refer to Engine Operation Manual for oil specifications and capacities.
- Refer to Engine Operation Manual for Oil Filter Specifications.
- Be sure the engine is turned off and sufficiently cooled down prior to draining the engine oil



Oil Drain Hose and Valve

1. Open the service side access door located on the left side of the saw.
2. Place drain pan beneath drain hose located at the rear of the saw under the frame near the radiator.
3. Remove red plastic drain plug and open drain valve on side of oil pan.
4. Drain oil completely.
5. Remove the oil filter located on the left side of the engine using a filter wrench and drain the oil into a suitable receptacle.



Engine Oil Dipstick and Filter

6. Wipe the filter head area of all oil and gasket material with a clean lint free cloth.
7. Dispose of the oil and filter in accordance with city, state and federal regulations.
8. Shut oil drain valve and replace red plastic drain plug.
9. Install a new filter on the engine. Lubricate the rubber gasket on the filter with a film of new clean oil prior to installing it.
10. Tighten the filter only hand tight.

11. Remove the access cover plate located on the engine cover panel to access the oil fill cap.



Access Cover Plate

12. Remove the fill cap.



Engine Oil Fill Cap

13. Place a funnel with a flexible hose end into the oil fill tube on the engine.
14. Add oil in accordance with the manufacturer's specifications and capacities.
15. Replace the engine oil fill cap.
16. Replace the access cover.
17. Close the service side access door and secure.

500 Hour Service

Replace Hydraulic Oil and Change Pump Filters

Prior to replacing the hydraulic oil and charge pump filters, ensure that the engine is off, has had adequate time to cool down, and is parked on a level surface.

The hydraulic system is comprised of a reservoir tank and three filters. There is a return filter located on the top of the tank. This filter has a differential pressure switch

associated with it and will provide a visual indication on the display when it requires replacing. There is a second filter, the hydraulic blade pump charge filter, located on the front hydraulic blade pump. A third filter, the wheel drive charge filter, is located at the rear left side of the saw behind the service side access door.

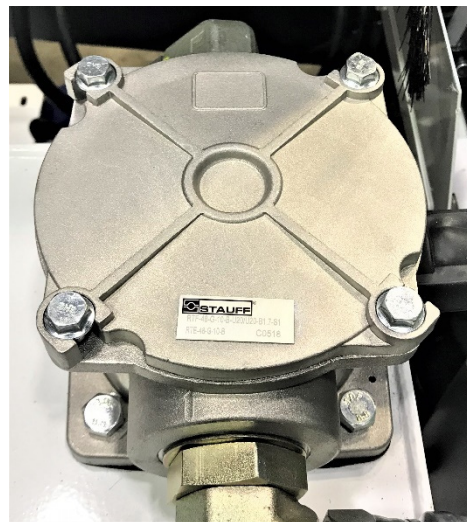
There are two basic methods for draining the hydraulic reservoir tank:

Oil extraction pump
Gravity drain.

Oil Extraction Pump

1. Ensure the saw is on level ground.
2. Lower the cutting arm assembly parallel with the ground.
3. Using a 1/2" wrench, loosen the four hex head bolts on the top of the hydraulic return filter just enough to allow for clockwise rotation of the top.
4. Rotate the top clockwise while pressing down to remove the top.

NOTE: There is a spring loaded bypass valve inside the filter, therefore it is important to maintain downward pressure on the filter top while it is being removed.



Hydraulic Reservoir Return Filter

5. Carefully remove the top, extension spring, bypass valve, and filter cartridge from the return filter assembly. Do not remove the O-ring or the filter bowl assembly. Set these components aside, do not discard.



Return Filter Components

6. Place the suction hose of the oil extraction pump down into the reservoir tank through the filter bowl opening.

NOTE: Ensure that the suction hose is of adequate length to reach the bottom of the tank. Distance from the top of the return filter to the tank bottom is approximately 28 inches.

7. Place the discharge hose of the oil extraction pump into a suitable oil drain receptacle.

NOTE: Ensure that the receptacle has enough capacity to contain the oil. The hydraulic system for the saw operates on approximately 25 gallons of hydraulic oil.

8. Operate the extraction pump in accordance with all manufacturer's guidelines. When all oil has been extracted from the tank, dispose of the oil and filter cartridge in accordance with all city, state, and federal regulations.
9. Using a lint free cloth, wipe down the inside of the filter bowl assembly and the area around the tank to ensure there is no free standing oil.
10. Using a 15/16" wrench, remove the ten inch round access cover on the side of the tank.
11. Using a lint free cloth, wipe down the inside of the tank to ensure there are no impurities in the oil.

12. Replace the ten inch access cover on the side of the tank and secure the bolt using a 15/16" wrench.
13. Insert the filter cartridge back into the filter bowl assembly and ensure that it is seated.
14. Place the bypass valve onto the filter.
15. Reinstall the extension spring onto the top of the bypass valve.
16. Reinstall the filter top by pressing it down onto the extension spring and rotating it counterclockwise until the bolts are seated in the bolt slots.
17. Tighten the four hex head bolts using a 1/2" wrench.
18. Unlatch the engine hood assembly, raise it up and secure it using the hood prop.



Engine Hood Latch

19. Place a suitable collection receptacle under the hydraulic blade pump charge filter.



Hydraulic Blade Pump Charge Filter

20. Using a filter wrench, remove the hydraulic oil filter from the filter head assembly and allow the oil to drain into the receptacle.

21. When all oil has been drained, wipe the sealing surface of the oil filter mounting bracket and the area around the pump with a clean lint free cloth.
22. Dispose of the oil and filter in accordance with all city, state, and federal regulations.
23. Add a thin film of hydraulic oil to the gasket on the new filter and screw the filter into the filter head until seated. Then turn the filter 1/2 turn by hand to secure.
24. Unhook the hood prop, lower the engine hood assembly and secure the front latch.
25. Unlatch and open the service side access panel on the left side of the saw.
26. Using a filter wrench, remove the wheel drive pump charge filter from the filter head and drain the oil into a suitable receptacle.



Wheel Drive Pump Charge Filter

27. When all oil has been drained, wipe the filter head area of all oil with a clean lint free cloth.
28. Dispose of the oil and filter in accordance with all city, state, and federal regulations.
29. Fill the new filter with hydraulic oil and add a thin film of hydraulic oil to the gasket on the new filter. Screw the filter into the filter head until seated. Then turn the filter 1/2 turn by hand to secure.
30. Close and latch the service side access panel.
31. Open the fill cap on the top of the hydraulic tank.



Hydraulic Tank Fill Cap

32. Add hydraulic oil, in accordance with the "Specifications" table located in the Introduction section of this manual, to the reservoir tank "Fill" line. DO NOT overfill. (Approximately 25 gallons).
33. Replace the fill cap and visually check all hoses and connections for leaks.
34. Turn the engine ON for 5 seconds and then shut it OFF.
35. Allow 30 minutes for air in the oil to settle out in the reservoir tank.
36. Start the engine in accordance with the "Operating" section of this manual and verify proper hydraulic function.
37. Shut the engine OFF.
38. When the engine has cooled check the hydraulic tank level sight gauge to ensure the hydraulic oil level is at the "Full Cold Fluid Level" mark and refill with oil as needed.

Gravity Drain

1. Ensure the saw is on level ground.
2. Lower the cutting arm assembly parallel with the ground.
3. Remove the hydraulic tank fill cap to vent.
4. Place a suitable oil drain receptacle under the hydraulic reservoir tank located on the left front side of the saw.

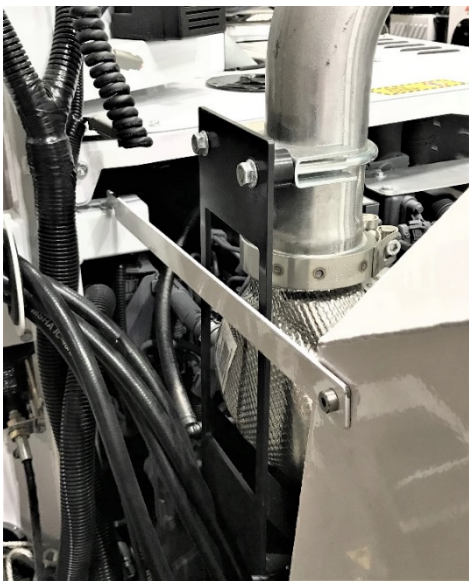
NOTE: Ensure that the receptacle has enough capacity to contain the oil. The hydraulic system for the saw operates on approximately 25 gallons of hydraulic oil.

- Using a 7/8" wrench, remove the drain plug from the bottom of the reservoir tank and allow the oil to drain.



Hydraulic Reservoir Drain Plug

- When all the oil in the reservoir has drained, replace the plug and torque to 30 ft.-lbs. (41 Nm).
- Using a 15/16" wrench, remove the ten inch round access cover on the side of the tank.
- Using a lint free cloth, wipe down the inside of the tank to ensure there are no impurities in the oil.
- Check the suction strainer and clean as necessary.
- Replace the ten inch access cover on the side of the tank and torque the bolt to 15 ft.-lbs. (20 Nm) using a 15/16" wrench.
- Unlatch the engine hood assembly, raise it up and secure it using the hood prop.



Engine Hood Prop

- Place a suitable collecting receptacle under the hydraulic blade pump charge filter.



Hydraulic Blade Pump Charge Filter

- Using a filter wrench, remove the hydraulic oil filter from the filter head assembly and allow the oil to drain into the receptacle.
- When all oil has been drained, wipe the sealing surface of the oil filter mounting bracket and the area around the pump with a clean lint free cloth.
- Dispose of the oil and filter in accordance with all city, state, and federal regulations.
- Add a thin film of hydraulic oil to the gasket on the new filter and screw the filter into the filter head until seated. Then turn the filter 1/2 turn by hand to secure.
- Unhook the hood prop, lower the engine hood assembly and secure the front latch.
- Unlatch and open the service side access panel on the left side of the saw.
- Using a filter wrench, remove the wheel drive pump charge filter from the filter head and drain the oil into a suitable receptacle.



Wheel Drive Pump Charge Filter

20. When all oil has been drained, wipe the filter head area of all oil with a clean lint free cloth.
21. Dispose of the oil and filter in accordance with all city, state, and federal regulations.
22. Fill the new filter with hydraulic oil and add a thin film of hydraulic oil to the gasket on the new filter. Screw the filter into the filter head until seated. Then turn the filter 1/2 turn by hand to secure.
23. Close and latch the service side access panel.



Hydraulic Tank Cap

24. Add hydraulic oil, in accordance with the "Specifications" table located in the Introduction section of this manual, to the reservoir tank "Fill" line. DO NOT overfill. (Approximately 25 gallons).
25. Replace the fill cap and visually check all hoses and connections for leaks.
26. Turn the engine ON for 5 seconds and then shut it OFF.
27. Allow 30 minutes for air in the oil to settle out in the reservoir tank.
28. Start the engine in accordance with the "Operating" section of this manual and verify proper hydraulic function.
29. Shut the engine off.
30. When the engine has cooled check the hydraulic tank level sight gauge to ensure the hydraulic oil level is at the "Fill" line and refill with oil as needed.

Replace the Secondary Fuel Filter

1. Ensure the engine is turned off and the saw frame is level.
2. Disconnect the water supply hose to the blade guard at the water valve.
3. Disconnect the wire harness to the seat safety switch.



Wire Harness, Seat Safety Switch

4. Using a 17mm wrench, unbolt the three hex head bolts attaching the seat mount to the frame base.
5. Using a 6mm Allen key, loosen the shoulder screw attaching the seat mount to the frame base and rotate the seat back enough to clear the fuel door.
6. Unlatch and open the fuel door.
7. Place a container under the secondary fuel filter.



Secondary Fuel Filter

8. Use a filter wrench to remove the filter.
9. Dispose of the fuel and filter in accordance with city, state and federal regulations.
10. Apply a thin film of fuel on the gasket of the new filter.
11. Screw the new filter on by hand until it is seated on the filter head, then turn the filter 1/2 turn by hand to secure.

12. Reconnect the sensor wire to the drainage cap/switch assembly.
13. Rotate the seat back into position and reinstall and tighten all bolts.
14. Re-connect the wire harness to the seat safety switch.
15. Reconnect the water supply hose to the blade guard onto the water valve.
16. Verify sufficient fuel pressure by turning the ignition switch to the ON position and wait for the display screen to boot up.
17. Turn the ignition switch to START and release when the engine starts.

NOTE: If the engine does not start within 10 seconds, turn off the key and try again approximately 30 seconds later. Refer to the engine manual for troubleshooting recommendations after several failed attempts.

18. Operate the engine for 30 seconds then turn the ignition switch to STOP.
19. The saw is ready for normal operation

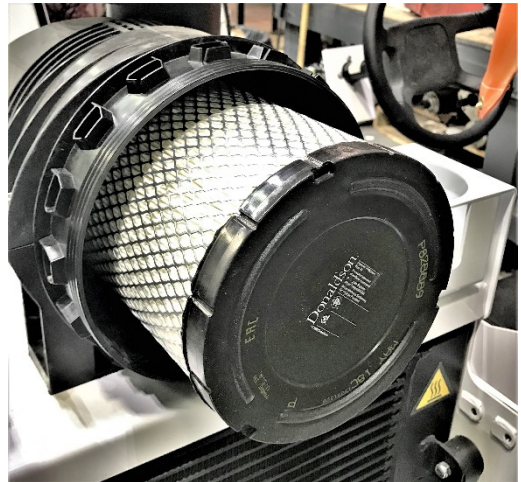
Replacing the Outer Primary and Inner Safety Air Filters

1. Pull out the tab on the air cleaner housing end cover.

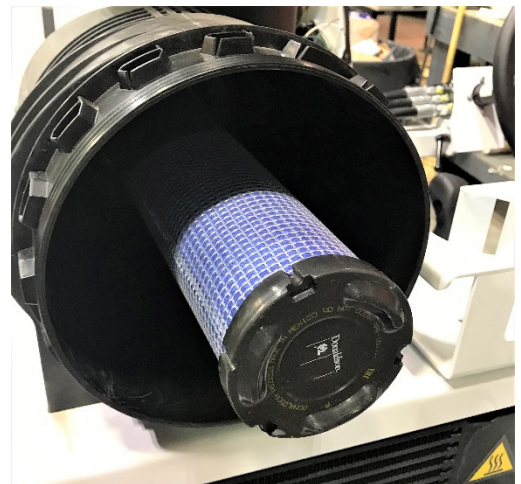


Air Cleaner End Cover Cap

2. Turn the end cover counter-clockwise to unlock and pull the cover away from the main air cleaner housing.
3. Remove the outer primary and inner safety filters from the air cleaner housing.



Outer Primary Filter



Inner Safety Filter

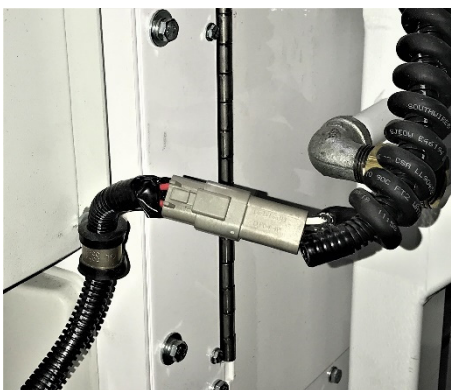
4. Inspect the inside of the air cleaner housing and the end cover for debris, and wipe them down with a damp cloth as necessary. DO NOT use compressed air to blow out the inside of the air cleaner housing. DO NOT allow dust to enter the air intake tube when cleaning or replacing parts.
5. Place the inner safety filter into the air cleaner housing until it is fully seated.
6. Place the outer safety filter into the air filter housing over the inner safety filter and gently push the filter into the unit until it is fully seated.
7. Place the end cover tightly up against the ridge at the end of the air cleaner housing.
8. Turn the end cover clockwise to lock the cover onto the air cleaner housing, making sure the dust ejector boot is in the vertical position.
9. Push the tab in on the air cleaner housing end cover to secure.

1000 Service Hours

Replace the Fuel Pre-Filter

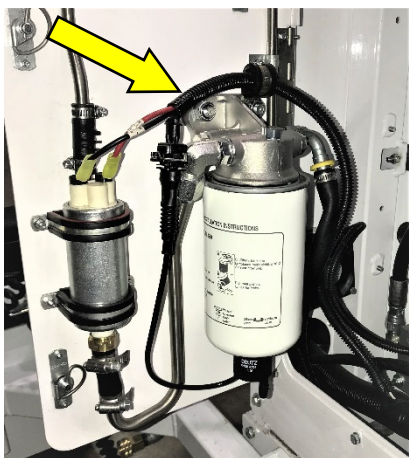
Replace the fuel pre-filter periodically to prevent wear on the fuel pump due to dirt in the fuel.

1. Ensure the engine is turned off and the saw frame is level.
2. Disconnect the water supply hose to the blade guard at the water valve.
3. Disconnect the wire harness to the seat safety switch.



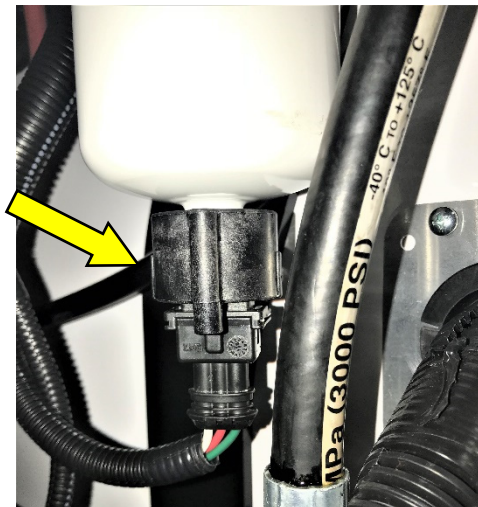
Wire Harness, Seat Safety Switch

4. Using a 17mm wrench, unbolt the three hex head bolts attaching the seat mount to the frame base.
5. Using a 6mm Allen key, loosen the shoulder screw attaching the seat mount to the frame base and rotate the seat back enough to clear the fuel door.
6. Unlatch and open the fuel door.
7. Place a container under the fuel-filter.



Fuel Pre-Filter

8. Disconnect the water level sensor harness from the bottom of the switch assembly.



Drainage Cap / Sensor Harness

9. Rotate the cap just enough to drain the water and fuel in the filter.
10. When all water and fuel has been drained from the filter, unscrew the drainage cap/switch assembly from the bottom of the filter.
11. Remove the filter using a filter wrench.
12. Dispose of the fuel and filter in accordance with city, state and federal regulations.
13. Apply a thin film of fuel on the gasket of the new filter.
14. Screw the new filter on by hand until it is seated on the filter head, then turn it 3/4 of a turn to tighten. DO NOT use a wrench to tighten the filter.
15. Reinstall the drainage cap/switch assembly on the bottom of the filter.
16. Reconnect the water level sensor harness to the drainage cap/switch assembly.
17. Rotate the seat back into position and reinstall and tighten all bolts.
18. Re-connect the wire harness to the seat safety switch.
19. Reconnect the water supply hose to the blade guard onto the water valve.
20. Verify sufficient fuel pressure by turning the ignition switch to the ON position. The electronic fuel system pump will switch on for 20 seconds to vent the system and build up pressure.
21. When the fuel pump shuts off, turn the ignition switch to STOP.
22. Repeat steps 19-20 two times to ensure the system is properly vented.
23. The saw is ready for normal operation.

1 Year Service

Wheels

The bearings in the front wheel hubs must be lubricated once a year.

Front Wheel Hub Removal

Whenever the hub equipment on the front axle must be removed for inspection or maintenance, the following procedure should be utilized:

1. Raise the front of end of the saw using a jack high enough for the front wheels to clear the ground.
2. Support the frame base with jack stands.
3. Using a 13/16" socket, remove the six lug nuts on the wheel hub and set them aside.
4. Remove the wheel.
5. Remove the grease cap on the hub by carefully prying progressively around the flange of the cap.
6. Remove the cotter pin from the spindle nut.
7. Unscrew the spindle nut and remove the spindle washer.
8. Remove the hub from the spindle being careful not to allow the outer bearing cone to fall out. The inner bearing cone is retained by the seal.

Bearing Lubrication

Effective lubrication is essential to the proper function and reliability of the wheel hub. Bearings should be greased every 12 months. The following procedure should be utilized:

1. Remove the front wheel hub in accordance with the previous procedure.
2. Remove the outer (Small) roller bearing from the hub assembly.
3. Remove the inner radial seal from the back of the hub assembly.
4. Remove the inner (Large) roller bearing from the hub assembly.
5. Place a quantity of lithium grease into the palm of your hand.
6. Press a section of the widest end of the inner bearing into the outer edge of the grease closest to the thumb forcing grease up into the interior of the bearing.
7. Repeat this while rotating the bearing from roller to roller.
8. Continue this process until the entire bearing is completely filled with grease

9. Apply a light coat of grease onto the inner bearing cup and reinstall the bearing.
10. Press a new radial seal into the back of the hub assembly.
11. Repeat steps 5 through 9 for the outer bearing.

Front Wheel Hub Installation

If the hub assembly has been removed for maintenance or replacement, the following installation procedure should be utilized:

1. Place the hub assembly onto the front axle.
2. Install the spindle washer.
3. Screw the spindle nut onto the shaft until it just touches the spindle washer.
4. Rotate the hub assembly slowly while tightening the nut to 50 ft.-lbs. to seat the bearings.
5. Then loosen the nut slightly to remove the torque. DO NOT rotate the hub.
6. Finger tighten the nut until snug.
7. Back the nut out only enough for the first castellation to line up with the cotter pin hole and insert the cotter pin.
8. Bend the cotter pin legs to secure the nut. The nut should be free to move with the only restraint being the cotter pin.
9. Reinstall the grease cap onto the hub assembly.
10. Install the wheel onto the hub assembly.
11. Reinstall the six lug nuts and tighten to 100 ft.-lbs. to secure.
12. Raise the front of end of the saw using a jack until the jack stands are clear and remove the jack stands.
13. Slowly lower the saw back down firmly on the ground.

2 Year Service

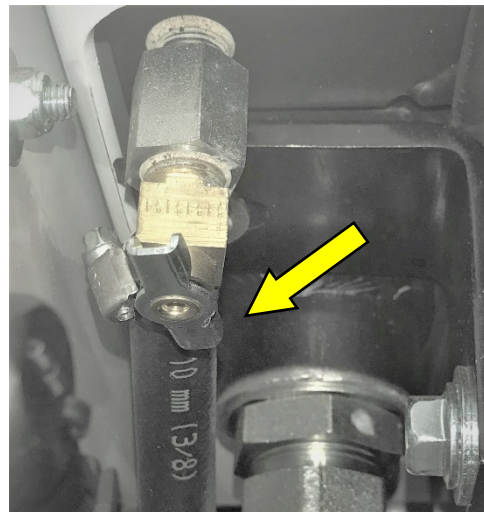
Replace Radiator Coolant

Ensure the engine is turned off and cooled down prior to replacing the radiator coolant.

To access the radiator drain valve, several panels need to be removed. Refer to the CC8574DD Part's List Manual for additional information and diagrams.

1. Using a 13mm wrench remove the two M8 x 20mm hex head cap screws attaching the cup holder weldment to the radiator bracket cap and set aside.
2. Remove the engine cover panel as follows:

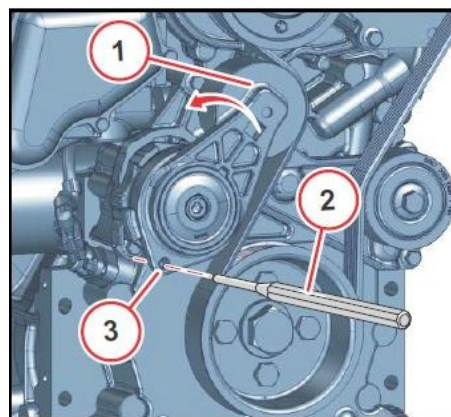
- a) Using a 7/16" wrench, remove the two 1/4"-20 self-tapping screws from the front of the engine cover stiffener and set aside.
 - b) Using a 10mm wrench, remove the seven M6 x16mm hex head cap screws and washers attaching the hose thru panel to the engine cover plate and set aside.
 - c) On the left side of the engine cover plate (louvered side) remove the three M6 x 20mm hex head cap screws and washers from the corners of the cover plate and set aside.
 - d) Using two 10mm wrenches, remove the M10 x 20mm hex head cap screw, washers, and lock nut from the front right corner of the engine cover plate and set aside.
 - e) Remove the two M6 x 12mm hex head cap screws and washers from the right side of the engine cover plate (nearest the operator's seat) and set aside.
 - f) Slide the engine cover plate toward the left side of the saw to provide clearance behind the hose guard panel located next to the operator's seat.
3. Remove the hose guard panel as follows:
 - a) Using a 10mm wrench, remove the two M6 x 65mm hex head cap screws and washers attaching the hose guard panel to the control side radiator support post and set aside.
 - b) Using two 10mm wrenches, remove the two M6 x 16mm hex head cap screws, washers, and lock nuts attaching the hose guard panel to the engine control side cover and set aside.
 - c) Remove the hose guard panel by pulling up and out and set it aside.
 4. Locate the radiator drain hose at the lower right rear of the saw and remove the red plug.
 5. Place a suitable collecting container under the drain hose (The system holds approximately 3 gallons of antifreeze).
 6. Slowly open the coolant expansion tank cap.
 7. Open the radiator drain valve located on the lower front of the radiator where the hose guard panel was removed.
 8. When all coolant has been drained, close the radiator drain valve.



Radiator Drain Valve

9. Replace the red plug into the end of the radiator drain hose.
10. Dispose of the coolant in accordance with city, state, and federal regulations.
11. Add a 50/50 mix of water and antifreeze to the system through the expansion tank. Fill only to the bottom of the fill tube, approximately 50% of tank capacity, to ensure enough air volume is present for coolant expansion.
12. Replace the coolant expansion tank cap and tighten to secure.
13. Reinstall the hose guard panel as follows:
 - a) Position the panel in place and attach it to the control side radiator support post using a 10mm wrench and the two M6 x 65mm hex head cap screws and washers.
 - b) Attach the front of the panel to the engine control side cover using a 10mm wrench and the two M6 x 16mm hex head cap screws, washers, and lock nuts.
14. Reinstall the engine cover as follows:
 - a) Align the engine cover plate in position and attach it to the top of the hose guard panel using a 10mm wrench and the two M6 x 16mm hex head cap screws and washers.
 - b) Using two 10mm wrenches, attach the front right corner of the engine cover panel to the frame using the M10 x 20mm hex head cap screw, washers, and lock nut.


- c) Attach the left rear side of the engine cover plate to the frame at the corners (louvered side) using a 10mm wrench and the three M6 x 20mm hex head cap screws and washers.
 - d) Attach the hose thru plate to the engine cover plate using a 10mm wrench and the seven M6 x 16mm hex head cap screws and washers.
 - e) Using a 7/16" wrench, reinstall the two 1/4"-20 x 3/4" self-tapping screws through the engine cover stiffener.
15. Reattach the cup holder weldment to the radiator bracket using a 13mm wrench and the two M8 x 20mm hex head cap screws and washers.




- 1) Tension Pulley
- 2) Retaining Pin
- 3) Assembly Bore

3 Year Service

Replace V-Rib Belt



WARNING




- Turn the engine off prior to servicing the belts
- Use extreme caution when working with belts and rotating machine parts to avoid entanglement.

Refer to the CC8574DD Parts List Manual for additional information.


1. Remove the bolts from the hose thru panel located on the engine top cover assembly and rotate it enough to provide access to the air intake tube at the engine.
2. Loosen the hose clamp on the Ø3" x 12" air intake tube at the engine elbow and disconnect the tube from the elbow.
3. Remove the two bolts mounting the air cleaner assembly to the saw and set the air cleaner assembly aside.
4. Remove the engine cover bolts and remove the engine cover from the engine top cover assembly.
5. Remove the six ultra-low head cap screws attaching the fan cover to the fan shroud assembly and remove the cover.
6. Remove the four bolts attaching the fan to the engine and remove the fan.

7. Remove the tension on the belt by pressing the tensioning roller with a socket wrench in the direction of the arrow until a retaining pin can be fixed in the assembly bore. The V-ribbed belt is now tension free.
8. Pull the belt off of the smallest pulley or the tensioning pulley before removing it completely.
9. Install a new v-ribbed belt
10. Use a socket wrench to retain tension on the tension pulley and remove the retaining pin.
11. Using the socket wrench, allow the tension roller to move clockwise and tension the v-ribbed belt.
12. Check the belt to ensure it is properly seated.
13. Reinstall the fan onto the engine, noting the engine side markings on the fan for mounting in the correct orientation.
14. Reinstall the four fan bolts and tighten to 22 ft.-lbs. to secure.
15. Reinstall the fan cover onto the top of the fan shroud.
16. Reinstall the engine cover onto the engine top cover assembly.
17. Reinstall the air cleaner assembly onto the saw.
18. Reconnect the air intake tube to the engine elbow and tighten the hose clamp to secure,
19. Reinstall the bolts on the hose thru panel on the engine top cover assembly.

Engine

 **WARNING**

- Let the engine cool down prior to servicing the saw.
- DO NOT service the saw with the engine running (unless stated otherwise).



Refer to the engine manual and manufacturer for a full engine maintenance schedule and additional engine maintenance information.


Engine Control Unit (ECU)

The engine is equipped with an engine control unit (ECU). The ECU monitors various engine parameters to ensure optimal engine performance and efficiency.


 **WARNING**


Never weld on the machine with the ECU connected to the wire harness.


Battery

 **WARNING**

- Ignitable explosive gases are emitted from the battery. DO NOT expose the battery to sparks or open flames, and keep the area around the battery well-ventilated.
- Disconnect the battery prior to servicing the saw (unless stated otherwise).
- Always keep the battery cable clamps away from the battery terminals when the battery is disconnected to avoid accidental connections while servicing.
- Always be sure to connect the battery cables to the proper terminal when reconnecting.





 **CAUTION**

- Use a proper battery tester when testing the battery strength.
- Use protective eyewear or a face shield and avoid contact with the skin when handling/servicing the battery.

The saw contains a charged battery with one positive cable lead and one negative cable lead.

Battery Type

12 Volt, Group 24

Servicing the Battery

1. Disconnect the negative cable lead from the negative terminal.

NOTE: Always disconnect the negative cable first.

2. Disconnect the positive cable lead from the positive terminal.
3. Unsecure the battery from the hold-down bracket by removing the two ratchet knobs from the battery hold-down tie rods and lift the hold-down bracket lid off.
4. Carefully remove the battery from the battery box.
5. When replacing the battery, carefully place a new battery into the battery box. Bring the old battery to a recycling facility; many battery retailers also accept old batteries.
6. When cleaning the battery, inspect the terminals, clamps, and cables for damages and corrosion. Clean the terminals and clamps using a wire brush, or use another approved technique for cleaning. Use acid-free, acid-resistant grease to grease the battery clamps and terminals. Carefully place the battery back into the battery box.
7. Reconnect the positive cable lead to the positive battery terminal.

NOTE: Always reconnect the positive cable first.

8. Reconnect the negative cable lead to the negative battery terminal.
9. Re-secure the battery to the hold-down bracket by removing the hold-down battery lid over the two tie rod bolts and tighten it using the two ratchet knobs.

Electrical System

 **WARNING**

Never weld on the machine with the ECU connected to the wire harness.

Fuses


The fuses are located in the power block assembly located in the junction box assembly behind the operator's seat.

Inspect all fuses if switches or controls are not working properly and replace as necessary. If fuses are failing frequently, determine the cause and repair immediately.

Replacing Fuses

The fuses used on this machine are smart glow fuses. They have an LED indicator light that will illuminate if the fuse is blown.

1. Ensure the ignition switch is in the STOP position.
2. Open the junction box cover.
3. Remove cover from fuse box
4. Turn the ignition switch the ON position and verify the fuse(s) that are blown.
5. Turn the ignition switch to STOP.
6. Disconnect the negative cable lead from the battery.
7. Remove and replace any blown fuses.
8. Reconnect the negative cable lead to the battery.

 **WARNING**

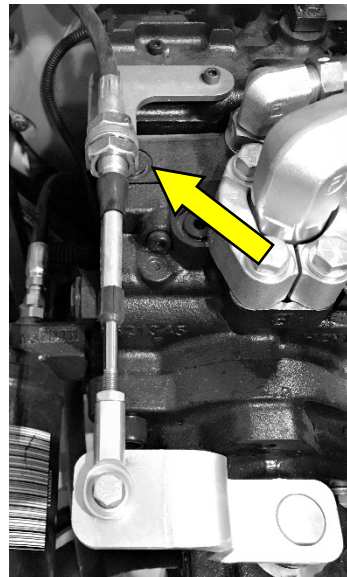
Never weld on the machine with the ECU connected to the wire harness.

Control Cables

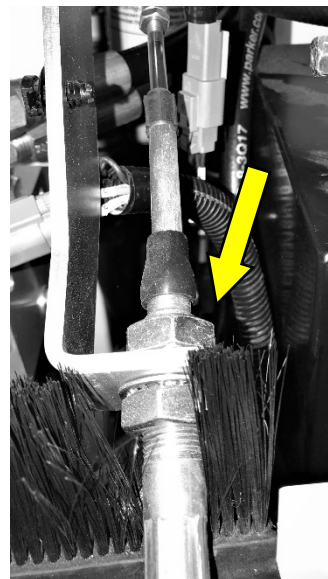
Adjusting the Wheel Drive Control Cable

The forward and reverse functions of the wheel drive control system are set at the factory. If additional adjustment is needed, there are two locations to accomplish this action. The first is at the front of the saw under the engine hood. The cable has two jam nuts located on the cable to adjust the cable length as necessary.

The second location is located just inside the upper front control panel where the control cable connects to the wheel drive control lever. There are two jam nuts at this end of the cable for adjustment as well.



Front Wheel Drive Cable Adjustment



Rear Wheel Drive Cable Adjustment

Adjusting the Blade Speed Control Cable

The speeds for the up cut and down cut functions of the blade speed control system are set at the factory. If additional adjustment is needed, there are two locations to accomplish this action. The first is at the front of the saw directly behind the engine hood.

The cable has a rod end located on the cable to adjust the cable length as necessary. The second location is located just outside the upper front control panel where the control cable connects to the blade speed control lever. There are two jam nuts at this end of the cable for adjustment as well.



Front Blade Speed Cable Adjustment



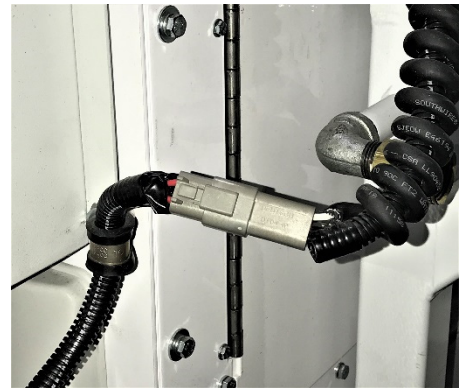
Rear Blade Speed Cable Adjustment

Adjusting the Wheel Drive Control Lever Tension

Adjust the tension felt in the speed control lever, when moving the lever forward and backward, to the desired setting as necessary.

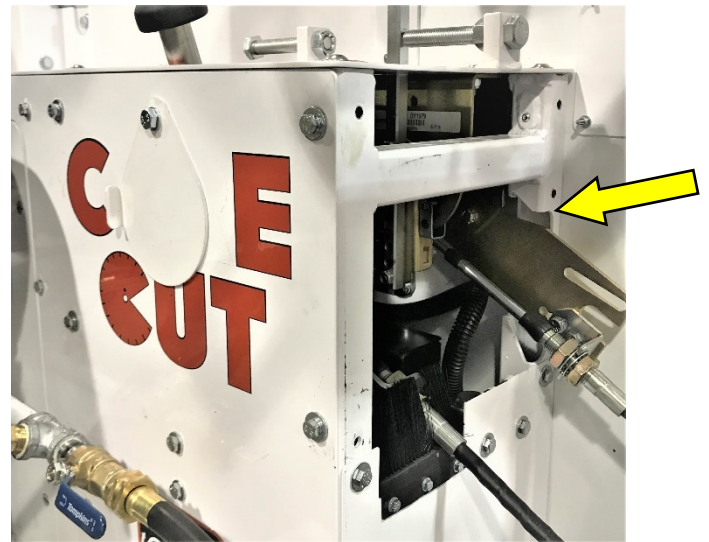
1. Ensure the engine is turned off and the saw frame is level.

2. Disconnect the water supply hose to the blade guard at the water valve.
3. Disconnect the wire harness to the seat safety switch.



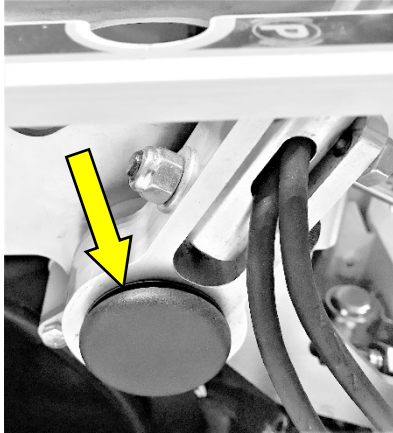
Wire Harness, Seat Safety Switch

4. Using a 17mm wrench, unbolt the three hex head bolts attaching the seat mount to the frame base.
5. Remove the four M6 x 40mm hex head cap screws from the upper front control panel and set aside.

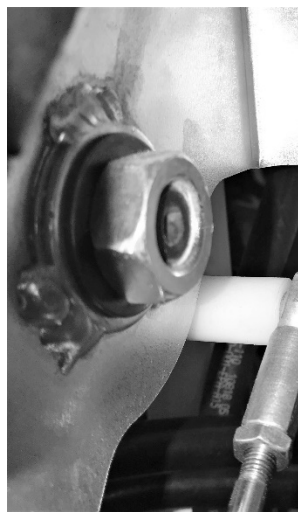


Upper Front Control Panel (Removed) and Wheel Drive Control Lever Access Cover

6. Access the grease cap by rotating the wheel drive control lever access cover to expose the opening, and remove it from the pivot housing to expose the 3/4" shoulder screw.
7. Using a 3/8" Allen wrench and a 15/16" wrench, adjust the tension on the speed control lever.



Grease Cap



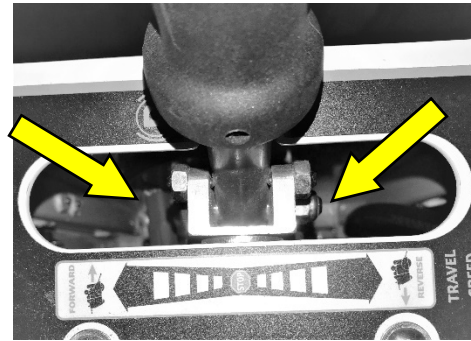
Jam Nut

8. Retighten the jam nut.
9. Move the speed control lever forward and backward to test the lever tension. Readjust the shoulder screw/jam nut if desired.
10. Secure the grease cap to the pivot housing.
11. Reattach the upper front control panel.
12. Rotate the seat back into position and reinstall and tighten all bolts.
13. Re-connect the wire harness to the seat safety switch.
14. Reconnect the water supply hose to the blade guard onto the water valve.

Adjusting the Wheel Drive Control Lever Spring Plungers

If the plungers fail to sufficiently retain the lever during normal operation, or when the lever is hard to place into or out of the STOP/PARK position.

1. Loosen both hex nuts from the speed control tube.



Spring Plunger Hex Nuts

2. Screw the spring plungers slightly out to let the speed control lever move easily into and out of the STOP/PARK position. Screw the spring plungers slightly in to let the speed control lever move forward and backward firmly in the forward/reverse slot.
3. Retighten both hex nuts to secure.

Transporting

 **WARNING**

Never transport the saw with a blade attached.

 **WARNING**

Never tow the machine as this may cause damage to the drive components.

1. Ensure the cutting arm assembly is raised high enough for the cutting motor assembly to clear the top of the frame base.
2. When driving up a ramp, always drive forward slowly and ensure that the ramp angle is no greater than 12 degrees.
3. When driving down a ramp, always drive backwards slowly and ensure that the ramp angle is no greater than 15 degrees.
4. Always secure the machine using the four tie-down D-rings to avoid damage during transport. The rings are located on the frame base, two in the rear and one on either side of the frame toward the front.

Storing

Complete the tasks listed below prior to storing the saw for longer time frames:

- Drain the water lines/hoses and blow out with air.
- Turn off all switches and controls.

- Lower the blade arm completely to remove strain on the lifting mechanism.
- Clean and wipe down the saw to remove dust, debris, and slurry from saw components (especially fans).
- Remove the battery and store in a proper location, out of reach from children.
- Refer to the engine manual for all engine and fuel recommendations prior to storing.

Store the saw in a dry area, protected from outdoor elements and out of reach from children.

Disposal

Dispose of the saw when it's no longer repairable, and/or contains safety hazards not worth repairing or maintaining. Complete the tasks listed below when discontinuing usage:

- Drain all fluids and dispose of according to city, state, and federal regulations.
- Remove the battery and bring to a recycling facility; many battery retailers also accept old batteries.
- Transport the saw to a salvage yard or recycling facility.

Appendix A

Troubleshooting

Troubleshooting the CC8574DD		
Symptom	Problem	Solution
1. Engine will not start.	Out of Fuel?	Fill fuel tank.
	Fuel lines clogged?	Unclog or replace fuel lines.
	Air in fuel lines?	Bleed fuel lines.
	Worn out battery?	Charge or replace battery.
	Faulty battery connection?	Inspect, clean, and tighten battery cables.
	Engine malfunction?	Refer to engine manual.
	Bad fuse?	Check and replace bad fuses.
2. Engine will not start due to a shutdown condition indicated on display panel. <i>NOTE: All problems must be cleared before saw will restart.</i>	E-Stop is active.	Pull up emergency stop button.
	Coolant level is extremely low.	Fill coolant system in accordance with "Bleeding Air from the Coolant System" procedure outlined in the Maintenance section of this manual.
3. Saw blade raises or lowers too slow or too fast.	Improper raising or lowering speed setting?	Adjust blade raising or lowering speed valve.
4. Blade does not cut straight.	Excessive force used when sawing?	Reduce forward speed. DO NOT twist blade from side to side.
	Wrong blade?	Contact dealer/manufacturer of blade.
5. Blade Speed Indication is not displayed	Damaged shaft tach sensor?	Replace shaft tach sensor
	Shaft tach magnetic sensor harness disconnected?	Reconnect sensor harness
6. Loss of blade speed and/or power	Clogged blade pump charge filter?	Replace blade pump charge filter

Appendix B**CC8574DD RPM Chart**

CC8574DD RPM CHART				
BLADE SIZE	BLADE RPM	ENGINE RPM	FLANGE SIZE	MAX CUT DEPTH
14"	2900	2600	6"	4"
20"	2450	2600	6"	7"
26"	1950	2600	6"	10"
30"	1650	2600	6"	12"
36"	1300	2600	6"	15"
42"	1050	2600	7"	17-1/2"
48"	900	2600	8"	20"
54"	850	2600	9"	22-1/2"
60"	750	2600	10"	25"

Appendix C

Additional Resources

1. Deutz (www.deutzamericas.com)
 - Operator's Manual Deutz Engine, TD 2.9 L4
2. Diamond Products (www.diamondproducts.com)
 - CC8574DD Parts List
 - A Guide for Professional Concrete Cutters
 - Training Manual – Introduction to Diamond Blades, Bits, and Equipment
 - Diamond Products' Equipment Catalog
 - Diamond Products' Website (www.diamondproducts.com)
3. Concrete Sawing and Drilling Association (www.csda.org)
 - The CSDA has many helpful concrete cutting publications available to members and non-members.
4. Association of Equipment Manufacturers (www.aem.org)
 - The AEM has a variety of safety and technical manuals available for various types of equipment, along with a list of industry-standardized safety symbols.
5. Occupational Safety & Health Administration (OSHA) (www.osha.gov/)
 - OSHA provides information on work-related safety and health practices.
6. The National Institute for Occupational Safety and Health (NIOSH) (www.cdc.gov/NIOSH/)
 - NIOSH provides information on work-related safety and health practices.

Appendix D

Model and Serial Numbers

Record the saw's serial number below for future reference and customer service purposes.

Serial Number	
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Record the engine's model and serial numbers below for future reference and customer service purposes.

Model Number	
Serial Number	

EQUIPMENT AND PARTS WARRANTY

Diamond Products warrants all equipment manufactured by it against defects in workmanship or materials for a period of one (1) year from the date of shipment to Customer.

The responsibility of Diamond Products under this Warranty is limited to replacement or repair of defective parts at Diamond Products' Elyria, Ohio factory, or at a point designated by it, of such parts as shall appear to us upon inspection at such parts, to have been defective in material or workmanship, with expense for transportation and labor borne by Customer.

In no event shall Diamond Products be liable for consequential or incidental damages arising out of the failure of any Product to operate properly.

Integral units such as engines, electric motors, batteries, transmissions, etc., are excluded from this Warranty and are subject to the prime manufacturer's warranty.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, AND ALL SUCH OTHER WARRANTIES ARE HEREBY DISCLAIMED.



333 Prospect Street, Elyria, Ohio 44035
(440) 323-4616 • (800) 321-5336 • Fax (800) 634-4035
www.diamondproducts.com